Lectures on Surgery

By

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g. of Dr. Crosbey 1-9-17

Lecture — first —

On Inflammation.

There is perhaps nothing more necessary, to the surgeon than the principles of Inflammation, for as there is a certain degree of Inflammation which is necessary to restore diseased parts to their healthy state, etc. Besides ~~is~~ there is other grades which are incompatible to performing this restoration — It is therefore a knowledge of its symptoms and also of its appearances, which it has in performing the restoration of diseased parts is absolutely necessary for the Surgeon. The term Inflammation was given to this process from the supposition of an accumulation of fire in the tissue inflamed. Tho' this idea is altogether incorrect in terms answers very well to express our idea of that operation: It may be connected with another disease or not: an instance of the former we see in Syphilis Scrophula &c —

Frequently improper treatment is the result of ignorance of the symptoms which violent Inflammation leaves behind it — for instance I knew a case of sprained ankle which after inflammation abated was very weak medical assistance was called in and the Physician prescribed some medicines which threw the patient into a hectic fever — An Inflamed part performs its functions with difficulty an instance of this we see in the eye which when violently inflamed loses the power of vision — —

Inflammation is of three kinds adhesive suppurative, and ulcerative, I shall only treat of the healthy kind in this lectures Inflammation is not necessarily a disease, because disease always tends to a destruction of the part but Inflammation but Inflammation is sometimes necessary for its restoration. In the healthy state it is of a healthy colour accompanied with a preternatural sensation, and if seated in the skin very often preceded by itching heat and a dull throbbing pain accompanies it. Weakness is never a disease tho it is often a predisposing cause of it — — — —

The causes of Inflamation are chemical mechanical or fever. Of the first are heat, cold, acrid substances and &c. 2. wounds. bruises &c. Inflamation does not always follow immediately the application of its cause, 24 hours sometimes intervening. A cause that will at one time excite Inflamation of one kind, will at another in the same constitution excite a different one. Different remote causes have been supposed to produce different kinds of inflamations but I think the variety is owing to the difference in the situation of the diseased part, for the same remote cause will produce Erysipilas in the face and common inflamations in other parts. Fever is sometimes the remote cause in a critical abscess. —

Inflamation depends greatly on habit i.e. a person unaccustomed to work will blister his hands very soon and a person unaccustomed to a high degree of heat will bear much less without injury than one daily exposed to it. If suppuration follows inflamation it is termed critical abscess. —

The healthy kinds of inflammation are adhesive and suppurative. An adhesive inflammation is an increased action in the vessels causing an extravasation of the coagulating lymph. It begins on the small vessels and spreads from a point in which for the most part it begins. Suppurative inflammation is an increased action of the vessels, creating Pus — In adhesive inflammation the matter which forms the union is coagulating lymph. The red globules are thrown out likewise but are again absorbed. When inflammation supervenes in a particular part, that part receives a more copious flow of blood through it than a healthy part, in consequence of the increased action of the B. vessels. That there is an increased action is proven by the parts being of pale red colour. If there was a diseased action it would be a purple colour. The diameters of the vessels are likewise enlarged which is proven by Dr Hunter's experiment on the ears of a rabbit. The swelling arises both from the thickening the coats

in the vessels and from the extravasation of lymph. The swelling is greatest at the point where the inflammation commences. The pain is produced by the spasm or convulsive action of the vessels, much in the same manner as it is produced in cramp, or tetanus, or by distention. When inflamation proceeds gangreen it is of a purple colour. The heat of an inflamed parts is considerably increased, but never rises higher than the course of circulation. The lymph secreted in adhesive inflamation becomes in time vascular and may be injected. Mr. Hunter proved that coagulating lymph was thrown out by observing that the matter found on the surface of inflamed cavities corresponded in every particular with the lymph of the Blood when divested of serum and Globules. The coagulating lymph is changed in passing thro' the vessels for if it be thrown out on the internal surface of a vein it refuses to mix with the coagulating mass

The effects of adhesive inflammation on the Constitution vary according to the degree of violence of the part affected. It is attended with little inconvenience when seated in the Skin but in the threw of tendons, or periosteums it occasions great pain producing symptomatic fever if the inflammation be great the pulse is quick hard and full, blood drawn is sizy. — This inflammation often terminates spontaneously in — which case it is termed spontaneous resolution, or adhesive. A man 36 years of age received a bruise on the leg by the fall of a pair of Irons upon it. six days before inflammation came on I was called to see him his body was at times in a tremor his extremities were cold, and clammy his pulse small and quick. his strength much diminished, he was cured by a dose of laudanum and the application of it to the part affected. I have seen Death induced in this way by the inflamation of a — lacerated wound of the joints. — —

Tumors frequently occur in the breasts of women likewise they occur in the thyroid called scirrhus, tonsils, and are produced by the effect of simple inflamations occasioned by the lymph not being absorbed when the inflamatory action ceased this takes place in glandular swellings and forms what is called a scirrhus tumor. By this it appears that there is no cancerous tendency in the blood. Inflamation also terminates by the secretion of serum if there be a secretion ~~from~~ of any one fluid from the part inflamed the inflamation does not run so high. Blisters which run well are much easier cured than those which do not. It is highly probable that inflamations of the Brain terminate in in what is called Hydrocephalus-internus and of the chest by forming ~~a~~ Hydrothorax. Local inflamations are frequently produced by fever —

Hæmorrhagies, sometimes terminate, inflamation — a remarkable instance of inflamation of the Eye which resisted bloodletting and other remedies was cured by the ~~bleeding~~ accidental —

of an artery of the Eye-lids which bleeds considerably. I have seen an incurable case of fistula in Ano from not bleeding in the inflamatory state. If inflamation be not stopped by some of these means, it proceeds to suppuration. When Inflammation happens from accident and proceeds too far we ~~in~~ should attempt resolutions in generals but there are cases in which resolutions should not be ~~atten~~ attempted. 1st. in very warm weather Costive indian Tetanus - a generals diet and cordial drinks should be recommended 2nd. If occasioned by a constitutional disease as fever - 3rd. If it be owing to the removal of any worse disease, when it occurs in any important part it should always be attempted - Some inflamation is necessary to the restorations of a part - Treatment. To effect a cure in the first place the remote causes must be removed. 2nd. reduce the inflamatory action ~~that~~ the parts may take on a natural one, this is effected by two kind of remedies

viz 1 Constitutional and Local. The Constitutional
ones are low diet bleeding purging with Neutral
salts, antimonial diluents, tamarinds water &c
and first low diet this tends to empty the blood
vessels, 2nd bloodletting this is the most pow-
erful remedy in inflammations since in-
flamed vessels are under the necessity of
contracting to adapt themselves to the column
of blood and as contraction is a very
different action from inflamation it allows
the parts to take on a natural action by
divesting them of the inflamatory one. Blood-
letting acts in two ways 1st it removes
the stimulus of distention by lessening the im
petus of the blood and secondly by lessening
the volume of the blood itself, 3rdly Purging
this is another remedy for inflammation
it also acts by lessening the action of the
vessels except when they produce Inflamma-
then they act sympathetically, tho' we are some
times obliged to deline it on account of -

= of the inconvenience attending it particularly in fractured limbs, Nitre, Sal. Amoniac, Glaubers salts, have been advised and antimonials, joined with them. Mercury often acts powerfully in the cure of inflammation 4th Rest this is highly serviceable. The whole body should be kept quite still and the apartment of a moderate temperature ——

The Local remedies are 1st bleeding by scarification Cups leeches &c — If a fever be caused by ~~generale~~ inflammation generale Bleeding should always be premised 2nd Colds this should only be used when the heat of the part is disagreeable and should never be carried so far as to become disagreeable to the patient also it proves injurious by acting as a stimulus 3rd Vinegar Sal. Amoniac. I myself have never found any salts of service applied externally, The preparation of lead and laudanum are often employed also Laudanum.

4thly. Poultices. these are either simple or medicated simple as bread and milk, the flax seed poultice. The medicated are the simple poultices made with medicines just mentioned. 5thly Blisters are particularly efficacious when used in inflammations arising from punctured wounds They are of very great use when applied directly over the inflamed part or in its vicinity they should be used when you are fearfull of too great evacuations – They produce resolution by the evacuation of serum Blisters are often applied to the inflamed parts when we are apprehensive of Tetanus –

.. Of the good Effects of adhesive inflammation They are instanced 1st in the healing of wounds 2ndly in abscesses. The cells of the contiguous cellular membrane are united by it, which prevent the pus from escaping from the cavity of the abscess and so stop the further progress of inflamation –

3rdly. Cysts are formed for the lodgement of extraneous bodies, as balls, shot, Glass &c. I was surprised at the tenacity with which they are held in their Cysts, when I attempted to extract shot lodged under the Skin Wthly in abscesses of the liver or any viscus the pus in its passage to the surface of the body is prevented from being effused in the cavity of the Abdomen by the adhesion of the affected part of the viscus to the parietes of the abdomen

Lecture 2nd

Of Inflammation Suppurative

We come now to speak of Inflammation Suppurative. If inflamation be not stopped by some of the means above mentioned it proceeds on to suppuration. Here the inflammation acts only by secreting pus, and the suppuration which takes place is a third remedy or mode of cure

The contact of air to external surfaces have been supposed to produce inflamations I once heard a professor say that he thought the action of the air occasioned inflamation in a case where the pleura had been pierced with a knife notwithstanding the violence of the act he imputed the inflammation to the action of the air. I once tried an experiment on a cat in this manner I made an incision thro' the pleura, through which I passed a tube and filled one side of the chest with air I then withdrew the tube and closed up the wounds in this situation it remained three days without any remarkable alterations It was then suffocated and upon examination no possible difference could be perceived between the two sides. I mention this to show that the effects of air are not so noxious as is often supposed to prevent surgeons from hurrying to much in closing up a wounds with a view of keeping the air from its surface —

when adhesive inflammation will not admit of resolution it goes on to suppuration. This stage is characterised by an increase of pain often attended by throbbing or shooting. The swelling enlarges the part becomes and at length the fluctuation is felt. It is now what may be termed an abscess or collection of matter containing pus — abscesses are often attended with rigour which are succeeded by fever and clammy sweats which symptoms are removed by evacuating the pus — If the pain be very great it may be relieved by opium this will be best effected by combining the opium with small doses of Emetics. A poultice of bread and milk is usually applied to the tumor, on which a prominent point is observable and here an opening is in general naturally made by an absorption of the parts beneath the skin. However an opening is sometimes made by the skin loosing its parts and

often

coughing away —

when this takes place it generally makes a pretty large opening. 1st If the time of this opening be protracted too long, it becomes necessary to make an artificial one. Several circumstances require this opening to be made early, 1st If the abscesses be seated in the thorax or abdomen 2nd If seated in any of the joints. 3 If attended with great pain in fazgonetica? The pain in fazgonetica may be almost immediately removed by opening. In suppurations attended with hectic fever the constitutions sympathises with the local irritation which the power of the Constitution is unable to overcome as when the fever is brought on by ulcers or affections of the tendons or ligaments or of any of the vitals parts. The symptoms of Hectic are great lassitude weakness lips of appetite cold night sweats, aptness to sweat on any little occasion or exertion, the pulse small and quick and frequently the urine high coloured, it frequently terminates in Diocarrhea. The process of suppurations suddenly stops and the matter already formed is absorbed, it is a happy termination and of course a desirable thing to fender-

Medicines which will produce this effect, accordingly many medicines have been employed for this purpose. Emetics and nauseating medicines have been known to produce this effect. The matter formed in buboes has been absorbed by vomiting occasioned at sea. I have observed blistering bleeding and purging to be of service. Hectic fever instead of being induced by suppuration as frequently supposed is sometimes cured by by its promotion. An instance of this kind occurred in an amputation of a leg. When the patient was afflicted with Hectic fever from a diseased joint ceased after the operation (Hectic has been cured by Issues which increase the Quantity of pus) when the surface and quantity of matter were increased a convincing proof that Hectic fever is not the consequence of absorption of pus. If suppuration proceeds to fluctuation so that it may be distinctly felt. the opening should be assisted by making an incision into the abscess. It is very customary to apply plaisters of different kinds to assist in breaking tumors

containing pus such as resins saccharine ~~mucl~~ ~~ter~~ substances & scarce any others do good, tho' that which is applied nearest preceding the eruption generally obtains the credit of accelerating the discharge, I believe they act merely by softening the parts, Blisters promote absorption by irritation. Abscesses formed on the Cranium should ~~be on this occasion~~ never be left to open of themselves such as impede respiration should be immediately opened The tonsils are so enlarged as to impede respiration they should always be opened under such circumstances matter does not always absorb towards the skin i.e. in tumors containing pus absorption does not always take place between it and the external surface of the body but sometimes makes its way more internally hence the necessity of opening abscesses when they form over joints or over any cavity. I knew a patient with a periodical pain in his head which afterwards was found to be owing to an abscess in the calf of his leg upon opening which the pain ceased I have seen frequently the symptoms of a nervous fever produced by a small abscess over the abdominal ring

in the first case the patient dieds owing to the igno
rance of the cause of the disease in the second the
abscess was opend and the patient recovered I.
have knowne another similar instance of an
situated in the axilla Abscesses situated in the
jaw should be opened soon to prevent the scar
that would otherwise ensue by leaving it to open
spontaneously as it would absorb much more of
the parts. There are two ways of opening abscesses
1 by incission 2nd by producing an eschar by means
of caustic. The first should be preferred unless in cases
where the timidity of the patient prevents it in
which a thin layer of Lapis Septicus may be applied
for the span of 8 or 10 minutes the part it touches will
soon slough off and gives vent to the matter or pus
after the matter or pus is discharged it may be treated
in the same manner as an ulcer, Pus is a light
straw coloured fluid of the consistence of cream
containing a number of globules. It does not
coagulate by heat if exposed to it but evaporates
to dryness it does not readily putrify. It is specifically
heavier than water and is easily miscible with it.

is not corrosive is said to be of a mawkish sweet taste. It is distinguished from all other fluids of the body by its containing globules of a peculiar colour which are suspended in a fluid only coagulable in sal-ammoniac which is not the case with any other animal fluids. Mr Hunter has observed that it is a secretion the vessels taking on the nature of a gland; and that the globules are not formed till after it is thrown out of the vessels, when practicable suppuration should be obviated by resolution

Inflammation Ulceration, ulceration takes place after suppuration, and suppuration takes place after the exudations of dead ulcerations In the Ulceration inflammation a part is always lost this is removed by absorbtion it commences mostly after the suppurative stage but has been known to precede it as in some particular irritations or when sudden death of a part has taken place Pressure has produced this stage without suppuration. That part of the body ulcerates

fasted which is nearest the absorption of the parts in ulcers is always attended with inflammation and pain which is called soreness. But this is not a necessary symptom of ulceration for we find that scrofulous ulcers are not painful when they proceed slowly but when rapid they are attended with great pain —

I shall now say a few words on abscess and first of the

Mammary Abscess —

Remarkable instances of ulceration attended with inflammation occur in mammary abscesses of women. These may be seated in the glandular part or in the cellular membrane. It seldom occupies the whole breast. If a part of the glandular be diseased the secretion of milk is diminished commonly but if the whole of it is affected the secretion is suspended altogether. It is attended with shooting pain that extends to the

axilla

If the abscess be seated in the Cellular texture the secretion of milk is not much impeded. They are mostly preceded by a chilly fit accompanied with pain of the affected part. There is sometimes more than one tumor felt. The time when the disease most prevails is the three or four months after delivery. Tho' women are always subject to them whilst they continue to suckle. These cases we seldom or never see till they have arrived to a considerable degree of soreness owing to the nurse supposing quite competent to the cure tho' they always fail in their attempts - although suppuration is mostly the result of ~~the~~ inflammation of ~~the breast~~ yet I have seen it terminate in Oedema, and the swelling to be so great as to protrude the parts round the nipple so as to hide it the swelling did not come on till ten days and I was not called in for ~~fifty~~ 6 weeks - When the adhesive inflammation takes place the coagulating lymph is sometimes thrown out without being

-again absorbed after the inflammation has subsided this forms an indurated glands or schirrus I have seen them as large as the first They are no ways cancerous because they have yielded to the antiphlogistic treatment. These affections are frequently owing to mechanical causes or tightness to a straining of the vessels by too long distention with milk. They are sometimes produced by the persons taking cold - In these cases when the glands are indurated they seldom return to their former size - Sometimes the glands are very much reduced in size and never after secrete milk —

<u>Treatment</u> - If called in the forming state ~~bleed~~ bleed according to the strength of the patient exhibit a mercurial purge and put the patient on a strictly vegetable diet. The breast may be anointed with warm oils. If it be convenient for the patient to be confined it should be done, if not support the breast by passing a handkerchief round the neck

If inflammations continue Vin. Seti. may be repeated and application of leaches to the parts will be found of great utility. Bread and milk poultices with lead water are highly serviceable after the other evacuations have been premised. If these do not give ~~of~~ relief and the inflammation continue a blister should be applied – A great quantity of plasters have been used and are often recommended but I believe they are of doubtful efficacy. The blister is not so painful as might be supposed, women who have not engaged rest for many nights before have been found to sleep soundly while it was operating. But be sure to keep up the evacuations per anum. An application of sal-amoniac and vinegar is frequently advised its is however of no use. Suppuration seldom takes place if properly treated from the commencement of the disease, but sometimes from delay in calling in the Physician and from his want of judgement it does occur. If it become necessary to open the abscess it is sometimes advised to do it freely by making a large Slit

But I have succeeded by making a puncture into the abscess and introducing a bougie to keep it open. The bougie must be drawn occasionally to avoids the within collected pus. In the case of Oedema Lapplicis Sal, Ammoniac mercurial ointments so the part and depletes generally by bleeding and purging but without any effect. The application of a blister removed the complaint. I removed an induratide gland attended with slow fever, which was afterwards cured by the antiphlogistic regimen and bleeding, by blistering and afterwards dressing with the mercurials ointment when the Scirrus was as large as the fist. Mercurial Ointment is quade in resolving tumors. Weakness in the joints especially in the hip joint without any apparent cause is generally a species of inflammation which may be cured if taken in time by purging sweating or anasumd by a secreting or throwing out coagulating Lymph into the cells of the cellular membrane. Vessels which are inflamed carry coagulating Lymph which adheres to their internals coats and becomes vascular ——

Lecture Third

Of Paryonchia

Paryonchia is a violent inflamation occurring mostly at the ends of the fingers, which frequently ends in suppuration. According to the seat of the disease it is attended with trifling or acute pain. Paryonchia may be divided into four kinds, when seated in the surface of the cutis-vera, 2nd in the adipose membrane under the skin here pain is much greater and matter is frequently effused under the nail the whole finger becomes swelled and painful. 3rd In the sheath of the tendons, and 4th in the periosteum In this last case the pain is very great tho' without swelling at first — when it takes place in the adipose membrane there is there more danger of mortification taking place The matter formed in these two last species of paronchia has sometimes passed along the course of the tendons under the ligament of the wrist and formed a tumor at the lower part of the forearm. The bone often becomes carious and sometimes the tendons slough away. I have seen mortification from this cause — It is difficult matter to point out the

causes of whitlow. I have seen it in one instance produced by the bite of a squirrel —

(Cure) In the cure little attention is to be paid to the first kinds, It may be opened and dressed with the unguentum Citrinum or simple ceratum containing Sacharum Saturni — When it is situated deeper than the skin make an incision down to it and if any part of the bone be damaged it ought to be immediately if possible taken away the dressing may be with dry lint or a poultice. Boiling water has likewise been advised in cases of paronychia. I believe when it is of any use it acts merely as a rubefacient; nothing else than opening the part is necessary if matter have travelled up the wrist it should be let out at the most protruding part Sometimes the orifice if small grows up with fungus as it prevent its healing For destroying this excrescence escharotics will be found tedious and often in vain — It should be conducted by enlarging the incision — I shall now proceed to say something of ——

Psoas Abscess

This disease is seated in the cellular membrane under the psoas muscles where matter is deposited in a cyst in the cellular membrane. Any of the remote causes of Inflammation may produce this disease. In its progress to the surface of the body it generally follows its course down along the bones If general it causes pain in the lumber regions but sometimes goes off without for 3 months without causing any pain the thigh on the side affected is weake the patient cannot will stands he generally bends the body to relax the muscles in the side affected he cannot rotate the thigh and is affected with rigors it sometimes happens that no ~~leaps~~ lapse before any one mark of ottain be seen. Its situation if anteriorly is not the same always it sometimes comes on the loins and I have seen it form on the buttocks sometimes the tumor is situated in the upper part of the thigh sometimes on the lower. The integuments of the abscess are discoloured.

The tumor is most tense when the patient stands up when lying down is soft or rather flaxid and relaxed. If pressure be made in the abdomen it will be flattened and protruded in the thigh, and vice versa. Coughing renders it more tense. The fluctuation may be readily felt. These abscesses never open forwards into the cavity of the abdomen, but sometimes they have destroyed the sides of the contiguous vessels and thereby produced fatal hemmorrhagy. If they rest a long while they may ovasion cavities of the cuticle. When it protrudes at the upper part of the thigh appears like Hernia. It has also been confounded with fistula in ano — Treatment If we are called to see the patient sooner we must keep him at rest and he must avoid animal food. Bleeding, scarification on the back. Leaches are also serviceable purge and cause the patient to lie on his back a little blister should likewise be applied to the upper part of it. Issues on the loins where the tumor has formed externally

It has been disputed whether the abscess should be opened or not - and some authors are affraid to make an opening into the cavity, but when it is long in opening it puts the patients life in danger if he left to its self to open. Mr. Hunter has observed that all cavities will inflame if opened until they unite by the first intentions. He observed that inflammation would attack every side of the cavity which is the cause of all the other symptoms that follow. Mr. Abernethy taking the hint from Mr. Hunter (no doubt) has proposed to open it so that the sides of the wound may unite by the first intention. He has proposed to perform this opperation with a lancet the puncture to be made in the longitudinal direction of the fibres, first to make an incision into the skin then to push the lancet obliquely through into the abscess by which means we would make a valvular opening - we should use no probes nor any thing to ascertain the depth of the sinus because they would irritate the part when the matter is discharged bring the edges together with adhesive plaster

after the matter is discharged a few times in this way it may be opened with the lancet freely without any danger as the sides of the cavity will be brought together and so closed as to become inflamed This is the best method of treating the abscess, I have tried this method and have found it to answer very well altho I have never been able to succeed in effecting a cure, because all the cases I have seen have been attended with a carries of the vertebra However very unfortunately the furniture does not always unite by the first intention and when this happens the inflammation which was spoken of and which is the fatal cause comes on (He relates a case) Besides the inflammations before spoken of there are some others first — Erysipilas —

This is an inflammation of the Cutis vera It sometimes begins in the forearm and spreads over the whole body It is frequently preceded by shivering which is succeeded by a hot fit the skin is of light yellow and

~~red~~ ~~dark~~ in some cases and dark in others, If you press it with your fingers the colour disappears but on removing the pressure the colour returns the pain is of burning kind the inflammation is often much diffused frequently spreading in one part while subsiding in another situated in the face it is attended with itching

Erysipelatous inflammation differs from the adhesive inflammation in which coagulating Lymph is thrown out in cells which form blister on the surface. Sometimes the tumor escapes into the cellular membrane, forming which feels like a gugguine infiltration sometimes spreading from cells to cells in the adipose membrane it is discharged in flakes like wet tow and is very offensive. This is mostly the case when it is situated about the arms Erysipelas generally terminates in about ten or twelve days—

Causes. The remote causes are so similar to those which excite common inflammation that—

I shall not enumerate them. It sometimes comes on spontaneously or without any apparent cause (air) In England barks is the cure the cure is much the same as in common inflammations It may generally be remedied by attending to the Antiphlogistic regimen before suppuration takes place but when suppuration takes place it must be opened early to its escape into the cellular membrane poultices before suppuration are improper Rye flour sprinkled on the part is very useful and affords ease. The application of a blister in such a way that shall be partly on the sound and partly on the inflamed part is of great service. When the part begins to heal an excoriation of the cuticle like bran is a favourable Symptom

— Oedema —

Oedema exists in the skin the cl may be seated deper-
In anasarca water is evacuated It is possible the same with adhesive inflammation
originally taking place in parts disposed to Dropsy

It is attended with burning pain —

Treatment the usual application is brandy or bread and milk poultice mixed with it or with Sacharum Saturni which is more useful than any thing else

Burns

~~The morbid effects produced by heat will be a Burn~~

The morbid effects produced by the application of heat differ according to the intensity of the application and the time of its continuance its effects are 1st when the degree of heat is low and reddens only of the parts affected 2nd Blisters causing a desquamation of the cuticle attended with an effusion of serum 3rd the death of the parts forming an eschar by the caustic the heat of the burning coals or any of the melted metals will produce this effect sometimes the bones are destroyed by the application of the heat & frequently terminates in death, when the life of a part only is destroyed the patient does not feel any great pain after the first effects till after 3 or 4 days

then the inflammatory process takes place for the separation of the dead parts. I saw a little boy who undertook to walk the edge of a caldron which was very full of very hot water in a soap manufactory when his foot slipping he plunged into the midst of it he was wet near two thirds over and his cloaths keeping the heat to the part a considerable while he was very much burned his pulse was scarcely perceptible. his extremities were cold and a heavy drowsiness prevailed – He was restless and kept constantly changing his position he spoke not also except when asked a question and then answered very rationally and when interrogated respecting his feelings he said he felt no pain. He died in about 6 hours. When these symptoms are induced by fire the patient seldom ever ~~lives~~ recovers. Burns affect old people the most. no they prove fatal at ~~all~~ times to all ages. A deep burn if it be of small extent or spread but little is but a small injury. but if it be of great extent tho' very superficial it is very dangerous when burns happen on the head they sometimes

occasions inflammations of the Dura-Mater. Burns occasioned by any of the molten metals appear of no serious injury at first, but after sometime the skin and vessels slough off and leave the bone bare below ensues and the patient dies Burns occurring over large joints frequently produce alarming symptoms before cures can and amputation becomes necessary for the recovery of the patient I consider inflammations resulting from differing from all other inflammations In the first place the pain is of a different kind from that of any other kind of inflammations being of the burning kind. second in not being capable of resolution & causing ulcerations of the parts underneath which throws up fungus granulations which are very difficultly suppressed 3rdly The cicatrices formed by ulcers resulting from burns have a disposition to contract more than any other cicatrices not the result of them causing thereby a much greater deformity of the part affected If they are cured ~~by~~ by totally different remedies as vol. alkalis Spts. of Turpentine

Treatment In cases of burns are very numerous and are either general or local. Most authors advise depleting remedies in burns indiscriminately, but they should not be used unless fever and great inflammation supervenes. If the burns be extensive and great weakness attends the patient may be supported by barks wines and even Brandy and water He should have any nourishing aliment he should desire. If the extremities be cold apply synapisms If from the invigorating plan inflammation and fever should supervene bloodletting and a more spare diet would be necessary The local remedies generally advised are cold water, soapsuds and Mr Earl in a small treatise recommends above all other applications vinegar and water this is a good application lime water and oil form a crust like a cuticle and the common people use potatoes. Of late very stimulating applications have been used as Ung. Salii Spts of Turpentine &c. Lafayette Kentish has used Spts of turpentine combined with varilicum and I have used it with very good effects

In many cases, the remedies Counteract. —
The most of these remedies ~~act only as pals~~ as cold water act only as palliatives relieving the pain and soothing the part for a time but the opts of turpentine and Barilian spread on large rags applied is a prominent application and very useful. Vol. alka & vinegar are good applications, I have used vinegar with very good effect. The turpentine and Barilian should be applied to the inflamed part for if it be in contact with the sound skin it will cause pain and great inflammation & swelling of the part. We are frequently not called to the cases burns till several days after a number of applications have been tried I have applied the turpentine and barilian when not called till 3 or 4 days after the accident. In one case of a burn of a child the turpentine and barilian was applied, but owing to the superstition of the parents and the clamours of the old women it was omitted for three or four days without my knowledge the child's became worse and a fungus arose over the ~~burned~~ surface of the burn. I was sent for again

The part was sprinkled with burnt alum and the turpentine and basilicon applied which soon cured the patient. In the case of a patient who was burned with gunpowder this medicine was used the pain intirely left him in about 48 hours after the application of the ointment however he presently complained of a pain in the little finger which upon examination appear not to have any of the ointment upon it and upon its application to this part the pain quickly ceased the inflamation subsided and he was soon cured. Spts of turpentine is one of the best applications in these cases inflamed parts when in contact are apt to grow together so that we should be very careful to keep the degrees between these surfaces which lie in contact with each other, while they are suppurating and granulating otherwise the granulations will unite and the parts adhere together. I know a case where the fingers of one hand

in consequence of a severe burn adhered together which evinces the necessity of keeping the dressings between such inflamed surfaces come new a of scald upon the parts of generation of a person which for want of proper care to keep the parts seperate whilst healing are united to the scrotum and that to thigh. The young man dies not like such a confused mass applied to Mr Hunter for relief who undertook his cure and was fortunate enough to succeed in liberating about a couple of inches to the no small satisfaction of the patient. Burnt parts sometimes formaly circumscribe the limb stopping the circulation of the blood and thereby producing mortification whenever this circumstance takes place the bond should be cut open

Lecture 48th

Mortification

Mortification is the entire destruction or death of any part it is of two kinds. 1 Inflamative or Mas which is preceded by inflammation

2nds deliberation or that proceeding from languor. Of the first kinds the causes are violent contusion ~~or intense heat~~ and likewise the application of intense heat or colds. 2ndly The destruction of the circulating of the bloods either by pressure or by tying up the principals artery. They both operate in the same way by cutting off the necessary supplies of blood when a part looses its life it first becomes to purple then lividness and then blacks, The cuticle then separates from the other parts. Brill and milder poultice should be applieds to the part and continued tills the deads parts slough off. In cases of violent inflammation the evacuations should be promoteds and opium given to relieve the pains the smalls degree of inflamating is salutary. Intense colds if not severe enough to kills produces first a palenes of the exposeds parts which is succeeded by redness and is attendeds with burning sensations and sorenes of the parts affecteds. If the colds be continuds it looses its sensibility and at length dies, Snow or freshs spring water should

— be applied to the affected part, after which the warmth of the part should be gradually increased to a comfortable degree. Mortification often comes on without any apparent cause. Of Mortification proceeded by inflammation there are two kinds 1st is when the inflamatory action is too great for the powers of the part to support in the 2nd there is something peculiar in the nature of the inflammation, the inflamatory action producing death not from its degree of force but by a burning operation on the cellular membrane has produced inflammation and mortification of the whole cellular membrane and bottom of the scrotum which by being destroyed sloughed and ~~came away~~ the whole of the cellular Substance came away with an intolerable factor. The escape of urine into the cellular membrane has produced the same effect. Mortification often takes place in the toes of old people particularly. It commences with pain and slight inflammation, of a purple colour vescication sometimes takes place round its edges but not always

The progress for the most part is slow but in some it rapid and very painful The upper part of the foot swells and the tissues ~~dilates~~ becomes dilated I have known it to arise from the prick of a pin or a knife in cutting corns. In the cure opium is the best remedy all stimulating remedies as the essential oils &c are to be avoided, never make scarifications or apply stimulating substances to assist in throwing off the slough For when the mortification leaves the parts will slough off without any assistance blisters should not be applied to this kind of mortification for whatever vivifies or stimulates the parts tends to increase the disease it has been advised to amputate in this disease but this should never be done while mortification is progressing lest it attack the stump and the patient undergo much unnecessary pain. In a case of mortification of the foot ~~I was invited and to amputate~~ which came on with a very offensive smell I was invited to amputate at the particular request of the patient

It was performed a little above the ankle. The arteries were completely ossified so much so that I was obliged when tying them up to mash them together with my thumb and fingers to prevent hæmorrhagy, a circumstance which often occurs in such cases. Pressure often occasions mortification in parts contiguous to the os sacrum in people who are long confined on their backs from broken bones or other causes and is most commonly preceded by inflammation. I have seen mortification produced in the arm by the pressure of the bed cloaths ——— ——— ———

The symptoms of mortification are a burning sensation, a dark red colouring disappearing when pressed, and returning slowly a tumefaction takes place which readily receives the impression of the finger small blisters containing serum rising round its edges — as the disease advances the red globules are thrown out. Avoid all hot fomenting applications. The Remedies for mortification are first general 2nd local —

The general remedies are blood-letting if inflamation present, but if it proceed from languor of the parts (it is the theory I have advanced the disease depends upon too much action be just) then all stimulating oils, balsams, cordials, scarifications, opiums, nourishing diet, barks &c. If the patient be accustomed to the use of wine it may be continued in every instance. Lndly. The local remedies are Blisters to the part affected; Charcoal poultices are of service to prevent the smell of dead parts. When mortification ensues from Erysipelas of the cutis vera and pus has made its way into the cellular membrane it should be laid open freely and treated with the bread and milk poultice. In mortification of the leg, pressure should be avoided for this purpose the leg may be supported by pillows placed under the thigh. I have been long in the habit of using nitric acid diluted with an equal portion of water. It corrects the fector by stopping the putrefactive process it may also stimulate the absorbents to a quicker action and cause them to —

separate the dead portion more rapidly - It should not however be applied too near the living parts or it will cauterize them - If the weather be very warm maggots are apt to be formed in the dead parts washing them with the dilute acid will remove them

The second species of inflammation is that peculiar kind which produces carbuncles They are circumscribed broad tumors pretty hard they begin in the skin like pimples are of a dusky red colour with paleness attended with burning pain a kind of suppuration takes place in the cellular membrane but good healthy pus is never formed They are situated on the back and sides and never most frequently in people who live well they are dangerous & if large and numerous, They sometimes occur on the head tho very seldom. They are dangerous on the head if large and numerous — much however depends on the strength of the Constitution

do case of Dr Wistar will serve to shew the peculiarity of the inflammation he was called to a man between 50 & 60 years of age in consequence of one of these carbuncles on his leg a circle of inflammation surrounded the tumor. The Dr was called about three days after the commencement of the disease after trying a number of remedies Dr Monges was consulted who as he was well acquainted with them when in France & had cured several of them by scarification according it was performed. being scarified transversly about 1/4 of an inch apart all over the surface and then a circular incision made all round it this effectualy cured it & it acted by changing the mode of action to the adhesive inflammation some years ago I was led from the uncertainty of remedies employed in gangreen to seek for some remedy more certain and effectual in its operations. From the good effects of blisters in many cases I was induced to try

them —

In mortifications and they succeeded beyond my most sanguine expectations The good effects of Blisters may be seen in the case of Capt. R. A. related in Coxes Museum Vol. 5th. who under a mistake had used fuscacap in a common after occurrence of life in consequence of which a violent inflammation ensued in the Tego-Axe and in the Scrotum The antiphlogistic regimen was tried without any benefit and after resisting bark ~~and the~~ in the most dangerous state and other remedies it was cured by the application of Blisters to the part affected The pain in Inflammation is caused by inflammation and spasm of the vessels a patient of mine was afflicted with a violet pain in the foot a small redish spot was seen on the top of it appearing like Erhemosis at first which afterwards disappeared and then came again a little above the ankle the patient now complained of great pain when the foot was raised up but which was somewhat abated by letting it down owing to the diseased action of the vessels because the blood filling the vessels overcame the spasm

which was the cause of pain for when the foot was raised the vessels were emptied of the distending blood and the convulsive action of the vessles took place a charcoal poultice was applied over his foot his bowels were disordered owing to his having taken too much laudanum which was obviated by a purgative the bark was given largely to the extent of half a pound in 24 hours but without any good effect application of bark and Brandy was applied over the stomach and fine qs Vol. Alk. given every two hours. The bark was now omitted as it was found to be of no benefit some senna and manna was given to obviate costiveness the mortification still increased a blister plaster was applied which stopped the mortification and changed the livid colour which passed to a red below the blister —

The charcoal fomenting applications were omitted and another blister applied just below the other on the limb which was of a dark colour and cold The dead part was washed by a solution of nitric-acid with equal parts water

The mortified part after this gradually sloughed off and the patient is now recovered. When mortification is caused by inflammation a blister should be applied. Blister have lately been found as effectual in the cure of carbuncles as of any other inflammation, especially in relieving that distressing burning sensation immediately I have lately cured one in the back of a Lady as large as a common plate which she compared to a warming pan of hot coals the sensation was so distressing, as soon as the blister was applied the mortification stopt the dead parts sloughed off in a few Days and the sore healed kindly

Dr Hunters Theory of Mortification. I believe is now pretty generally received, that it is an increased action beyong what the powers of the system or part are able to support but I am rather inclined to think that in every species of Mortification there is something peculiar leading to the death of the part Something more than the violence of inflamatory action

nor if it depends on volume of action alone the application of a blister which is highly stimulating ought to produce the death of a part more Quickly by producing a still greater increase of action but on the contrary it effects a cure I believe by altering the disposition by changing the morbid action from the diseased to the healthy kind

Lecture 5th

Wounds.

A wound may be defined a seperation of external parts by mechanical action they differ according to the situation of the part injured and the instrument by which the injury is sustained. There are two kinds of wounds 1st. bruised 2nd Contused An incised wound is made by a clear sharp cutting instrument a Contused wound is made by or accompanied by a bruising of the soft parts and is divided into three kinds Lacerated Punctured and gun shot wounds and are

always attended with a greater or less effusion of blood - In incised wounds there is generally a considerable flow of blood but in lacerated wounds large vessels are often divided without any considerable haemorrhagy - Incised wounds bleed much more than contused ones because in the first case there is nothing to prevent a flow of blood but in the latter the dead matter at the ends of the arteries contused by the contusions act as a stimulus to the coagulations of the blood (He relates a case from Chesselden) "I once saw a case where a boy had his arm ground off in a Mills between the elbow and shoulder in this case scarcely any haemorrhagy ensued owing to the contused ends of the arteries causing the blood to coagulate in their extremities and forming firm stopped the Haemorrhagy an incision by a knife would have caused a much greater Haemorrhagy. There are three ways in which haemorrhagy may terminate in cases of contused wounds. First by a diminished power of Circulation. Secondly by the coagulation of the blood forming clots. Thirdly by pressure caused by effusion

of blood into the cellular membrane which pressing on the sides of the vessels diminishes their diameter. Bruised parts cannot bleed much the haemorrhagy is stopt by the bruised part causing the coagulation of the blood the coagulation takes place first round the edges of the vessels. Contused wounds by the violence of the pressure occasion the death of the ends of the vessels. In incised wounds the first thing necessary to be attended to is the flow of ~~the wounds~~ blood this sometimes is in great quantities but not unfrequently a short time after the injury spontaneously ceases. A coagulation is formed and as it were plugging up the ends of the vessels. If this be not the case it may sometimes be made by pressure made by by the ends of the ends of the fingers but should this fail a Tourniquet must be applied above the ~~fingers~~ elbows if the wounds be below the knee it must be applied on the thigh a compress must first be applied over the artery. The Haemorrhagy being stopped the part must be washed clean with warm water and search made for the

Bleeding vessels which being found they must be drawn out and secured by ligatures it is necessary to tie both the ends of the divided vessels if they be large otherwise the haemorrhagy will be carried on by the anastomosing branches, When an artery is divided in the body, so that it cannot be got at easily it is necessary to grasp the tenaculum along with the finger after previously tying a knot over the finger and tenaculum & then you come to the arteries as soon as you can get holds of the bleeding vessels slip the noose over it and secure it. In cases where the tenaculum cannot be used when the vessels have so contracted that we cannot see their orifices recourse must be had to the needle passing it round a portion of flesh and tying it up altogether if the orifice be too small enlarge it with the scalpel. This does not often happen if an injury is received on the upper part of the arm the tourniquet cannot be applied here compression with the fingers may

be made on the subclavian artery just where it pas
ses of the first rib, or if the injury be down to the
artery in the upper part of the thigh pressure
may be made on the groin, just where the
artery passes out of the abdomen sometimes
pressure may be made above the wounds large
enough for the formation of a plug or coag
ulum in the extremity of the divided vessels
and so put a stop to the bleeding. It sometimes
happens that vessels are divided in such a situ
ation as not to admit of this kind of treatment
as in the extraction of tumors from the mouth, of
which are supplied three or four arteries, if only
one vessels be divided the haemorrhage may be
stopped sometimes, by holding a compress of lint
for a few minutes on the bleeding orifice if the
effusion take place from a number of small ves
sels it may be restrained by compresses of lint
coal, the application of dry sponge, flower, agaric,
vegetable astringents. But if this is insufficient

we must have recourse to the ancient but sure method of hot iron we sometimes finds that when the vessels are ~~[illegible]~~ injured if the external communication be small that the coagulum of of bloods will stop the haemorrhagy. I saw an instance of this kinds when a boy in quarrelling with his schoolfellow received a wound in his hand by a penknife the immediate consequence of which was an effusion of blood into the cellular membrane causing a considerable tumor and great pains the whole calf of the leg was very much distended in this situations he walked home increasing both the pains and tumor, he went to beds and next morning both pains and tumor were gone without rousing himself when he got up dressed himself and went down stairs when the tumor immediatly returnds he went to beds and the tumor subsedes again. This alternation was appearands two or three times at this time I was

called. I immediately pronounced it a wound of the popliteal artery and put the boy to bed and raised the limb to take off the force of the blood by its gravity, the volume of blood was considerably lessened by two or three bleedings. In about a fortnight or three weeks he was quite well, In such cases no probe should be used to ascertain the depth of the wound least you destroy the plug formed in the orifice of the artery and bring on haemorrhagy, the practice of some surgeons stopping the part full of lint is a very injurious one and ought always to be avoided. Least you tear open the coagulum nature has kindly formed after the stoppage of haemorrhagy bandages, adhesive plaster, or sutures, must be had recourse to for approximating the edges of the wound and if the injury be done to the extensors of the limb it may be necessary to apply a long splint to secure the limb in an extended position

In most cases adhesive plaster will be found sufficient. but in wounds of the abdomen sutures must be used or else the patient will be liable to hernias at that place the coagula should be washed away or wiped and then the adhesive plaster spread on leather or linnen should be applied transversely across the missing drawing the edges together they should be applied in such manner as to favour the escape of the bloody matter, and pus, for if it be confined it may collect in the cellular membrane and occasion an abscess this seperation of the strips is more especially requisite when an artery or vein has been taken up so that pus which is necessary formed may have passage to escape after the sides of the wound are drawn together and secured by the adhesive plaster a portion of lint suited to the size of the wound spread with any kind of cerate may be spread on the top of which a check layer of lettuce is to be ~~applied~~ placed and the whole secured in

order by a bandage. These dressings should not be removed for 48 hours in which time I have seen an union of the divided parts. inflamma is only now to be found if much inflamma tion be present blood letting must be used according to the symptoms low diet, rest, and purges may be used occasionally to prevent Costiveness if no inflammation ensue and the patient be weakened he may take some animal food as some inflammation is necessary to cause an union. This practice is commendable except in wounds caused by glass which should be left to suppurate as parts of the glass may remain in the wound. Even transverse incisions may be remedied by adhesive plaster and may be generally found sufficient and the limb placed so as to cause no restraint in bringing the edges together. This should always preferred to stitching it up with a needle & that for two reasons

avoiding pain 2nd every stick of the needle ~~makes~~ adds a new punctured wound to the injury & 3rdly. the threads usually occasione a ~~disfiguration~~ by the irritation ~~by the~~ ~~dust~~ ~~or~~ it produces but there are some parts where suture must be used as in the eyelids, nose, ears, and scrotum, abdomen, particular affections of the scalp & where the parts are so flexible as not to admit of other treatment. We should be careful in injuries of the scalp not draw the divided edges too much for the purpose of bringing them together, least by even stretching the flap we stop the circulation and so produce mortification of the loosened extremities or parts —

§ Punctured wounds

A punctured wound is a seperation of the soft solids communicating by a small opening externally. the irritation here is greater than in incised wounds, In cases of punctured wounds we should be very cautious in using a probe for

the purpose of investigating the depth of the wounds since by that means we irritate the wounded parts and destroy the adhesion that may have taken place and thereby prevent or retard the cure it is better to make an incision to examine for any extraneous substance near the surface than to use a probe or forceps for that purpose. This should be done soon after the accident happens or else it should be deferred till after suppuration takes place. When matter shall have collected in a punctured wound and the extraneous body by which the injury was inflicted be not discharged it then becomes very necessary to dilate it or when large vessels are wounded and cannot be taken up without. Again it becomes necessary to dilate them when the constitutional effects from them. In July 1805 a lad in getting over a fence fell upon a nail which ran into the flesh about one inch below the knee upwards towards the joint febrile symptoms came on and he complained of sickness in the Epigastric region pain in his neck and head his pulse a frequent and quick

The wound was opened and the pain was translated to the wounded part immediately and excepting here he felt no pain in any part of the body. The wound was dressed with common plaister and healed very kindly. I knew a Lady who was thrown into Convulsions by puncturing her finger with a needle. These convulsions continued for the space of an hour and a half the puncture was dilated then and the spasms went off without returning When punctures or Contusions happen during warm weather they should not be healed up too speedily but suppuration of the part should be promoted cordial diet and wine should be given by which means we frequently prevent Tetanus.

Lacerated Wounds

are made with blunt instruments which kill the flesh where it is scherulus. Anodynes combined with small portions of emetics so as to act as Sudorifics for the purpose of composing the patient should be given and bredd and milk.

poultice applied till the dead parts come away. If inflammation accompanies with fever suppurene it must be remedied. If symptoms of mortification come on ease the pain with opiates & prescribe porter, wine, barks &c -

Penetrating Wounds

are such as extends into the abdomen, Thorax, & when when wounds happen in the thorax they are attended with great danger by causing inflamation of that cavity, If the lung be wounded or the puncture be made through the pleura be not very small the air gets into the cavity the lung collapses and the patient performs respiration with great difficulty If the lung be wounded the patient coughs up blood and there is great effusion in the cavity causing great depression sometimes the vessels are injured so that we have to take them up. If one of the intercostals arteries be divided so that the tourniquet cannot take it up pass a ligature round the rib by means

of a needle and secure it in that manner
this I have never performed. Shot causes the worst
wounds because it always tears the soft parts and
occasions a loss of substance. Wounds in the thorax
occasioned by balls are very distressing. They gen
erally inflame the part when they enter making
suppuration and sloughing off necessarily before
the orifice can heal. The patient is affected
with anxiety and difficulty of breathing. Blood
letting, rest, and low diet, are necessary the dry
dings are apt to draw into the cavity of the
thorax in breathing this had very near happen
ed ~~in a case~~ one under my care. Care should
therefore be taken to dress such wounds with ad
hesive plaster or breads and milk poultice
contained in a gauze bag for the purpose the
edges of the wounds when not killers should
be kept together to unite if possible by the first
intention when the sides of the wounds are app
proximated the cavity is rendered complete
and the cure is effected. No bad effects are

to be dreaded from the air that may remain in the cavity. This never causes inflammation as is proved from emphysema. The inflammation when it supervenes ~~arises from the stimulous of air~~ Mr. Hunter says arises from the stimulous of inhersiation.

Two officers playing cards together a dispute arose between them whereupon one stabbed the other with a dirk just above the right paps in the Chest the air had no admittance into the cavity when I saw him his extremities were cold his pulse small and irregular his countenance lived no symptom of inflammation of the pleura appeared. I applied adhesive plaster over the wounds & the 3rd day it had united and by the seyth day he was able to walk out into the Street &c Having spoken of wounds in general I shall proceed to particular ones and first of —

Wounds of the Face

as there are many cases in which the treatment of Suture is always necessary so there are likewise case in which it should never be used the ancient Surgeons used Suture in almost all cases of wounds. but in wounds of the face suture should not be used as it always causes deformity by the marks of the stitches remaining after the wounds is healed. I have seen a Lady one side of whose face was very handsome and the other side very much deformed in consequence of this mode of treatment. In wounds of the Eyelids unless the [illegible] be inclined adhesive plaster will generally be found sufficient but should be extremely careful of puncturing the lachrimal duct the stitch should only go through the skin of the Eyelids because if the thread were to come in contact with the globe of the Eye it would continually irritate and bring on inflammation of the whole eye.

I have seen a case where shot entered the eye just at the edge of the sclerotica and penetrated to the chrystaline lens I have seen another case where the eye of a young lady was punctured by a piece of glass From whatever cause the eye may be wounded we should endeavour to remove all irritating substances & by well timed bleeding purging and low diet Blisters and scarifications &c. with the use of Collyria we may prevent suppuration the best Collyrium is an infusion of the pith of sassafras in water or milk and water the patient should be kept in a dark room if blindness ensue it is sometimes in the surgeons power to remedy it by an operation of this I shall say more hereafter, See cases in museum generally in wounds of the lips unattended with a loss of substance it will be sufficient to bring the divided edges together with adhesive plaster but if a portion of the lips

be lost it is necessary to use Suture ——
In wounds of the tongue which we sometimes finds to occur from people biting or from receiving a blow on the chin when the tongue is protruded it is necessary to use the interrupted suture as it is difficult to get at a wounds of the tongue the patient shutting his mouth from pain it is necessary to place a soft stick between the teeth to prevent being bit the tongue if necessary may be drawn out by a hooks wounds of the tongue generally heal in about six days the patient should be fed with spoon victuals ——
In wounds of the Ears a simple suture is sufficient Wounds of the throat mostly occur to people intending to commit suicide when the skin only is divided there is no difficulty in curing it but sometimes the trachea is divided and the large vessels are exposed the first thing to be done is to attend to the haemorrhagy

and secure all the bleeding vessels either arteries or veins even if the carrotids be divided they may be secured by a ligature as the circulation to the head may go on by the vertebral artery when the haemorrhage is secured the sides of the wounds may be approximated. This can mostly be done if — small by adhesive plasters alone but if this is not sufficient we may use a suture having caution to include the skin and cellular — membrane fonly for if a stich was taken in the throat it might creat vomiting by irritating the Pharyngeal and if a stich was taken in the side of trachea it would occasion continual cough when this is done the head should be inclined forwards to favour the union of the divided edges and be secured in that position by a bandage I believe in every case it would most proper scat to draw the divided edges too close so that the blood and matter

if collected may be discharged as the vessels both arteries and veins should be secured altho' apparently done bleeding for if any blood be left oozing from the orifices it may escape into the windpipe and cause suffocation in wounds of the throat a great deal of inconvenience results from swallowing as every such attempt must separate the sides of the wounds to remedy this it has been advised to introduce a pipe thro the nostrils into the throat for the purpose of conveying food into the stomach but it causes too much irritating & is impracticable. Keeping the patient continually coughing and sneezing. He should be supported by nourishing injections thrown up frequently if cough over it must be relieved by emollients In wounds of the abdomen if superficial the treat should not be different from that of any other part of the body but if the wounds be into the parietes of the abdomen there will be

danger of the peritoneal inflammation. To prevent this it will always be desirable to unite it by the first intentions. If the intestines protrude after cleaning them ~~away~~ they should be returned and the wound closed by the intercepted suture. In the suture of the abdomen two needles should be used with each ligature and the stitches should be commenced interally at the distance of about 3/4 of an inch from the divided edges and the stitches be about 3/4 inch apart the patient should be kept to a vigorous diet and the bowels freely opened. When union shall have taken place between the denuded edges the stitches may be removed and the adhesive plaster applied. If any of the viscera are wounded they should be first secured before we stitch up the wound of the parietes. The chief danger arising from wounds of the hollow viscera, is the escape of their contents into into the cavity of the peritoneum. generally in wounds of the abdomen a piece of omentum

protrudes at the orifice and if the intestines be wounded fæces frequently pass out and the patient will have bloody stools —

If the stomach be wounded food will be discharged vomiting of blood and cold sweat tendency to faint and when fatal the patient dies about the third day after receiving the death

When the intestines are wounded they may be stitched four of which will be found sufficient the knot may be tied so as to be on the inside of the intestine when this is done cut off the ends of the thread and return the intestine the thread will get into the cavity of the intestine and pass off by stools It was formerly the custom to bring the ends of the ligature out of the wounds in the abdomen in every case where the intestines were stitched until Dr Cooper proved that the remaining part of the thread if cut off close and left in the belly will get into the cavity of the intestines and pass off by stools He tried the experiment on a dog in which he succeeded we are not absolutely certain that it

wounds in the human subject

Transverse incisions of the intestines are easier healed than longitudinal ones and it costs much more pains to close a longitudinal one than a transverse one as it lessens the diameter of the intestine causing a lodgement of the fæces at that place. If the longitudinal wound be not too extensive that portion may be removed and the transverse ends brought together. The practice has been tried and succeeded where three inches had been cut off. The patient should be fed sparingly so as not to distend the intestines his food should be almost altogether spoon meat. Opiates laudanum should be given to allay the pain and keep the intestines still so that their peristaltic motions may not prevent the union of the wounds. Glisters should not be administered else probably a part may escape by the wound. Even wounds of the Stomach may be stitched. I have known an instance where it was demanded the patient recovered. When the Omentum is wounded generally some haemorrhage ensues

The bleeding vessels may be taken up with the tenaculum and secured by a ligature and the omentum stitched to the ends of the thread must be left out of the wound in both cases sometimes the bowels are injured and do not protrude It has been a question of dispute whether wounds in the parietes of the abdomen should be dilated to search for the injured parts or not. I believe it is right to search for them by enlarging to a degree the wound if it be not large enough already. But the wound should not be enlarged freely or we shall induce great inflammation but there are cases where the intestines have been wounded and have recovered where nothing has been done in such cases. Where the intestine is wounded it commonly unites to the peritoneum round the wound of the parietes by the adhesive inflammation it would seem when the intestines are wounded they stop their peristaltic motion so as to prevent their adhesion. When the bowels are injured

and cannot be found if the orifice be large enough for the intestines to protrude it should ~~protrude~~ be stitched up. If inflammation supervenes copious bleedings, purging, low diet, &c are necessary and sometimes tho the circulation yet the inflammation progresses. In wounds of the Liver if the right lobe be wounded the pain will be in the right shoulder. If the left lobe the pain will be in the left shoulder it is of a dull heavy kind If the wound be small it will in general heal soon but if the wound be large there is generally a considerable haemorrhagy and sometimes inflammation is produced in the peritoneum by the distention and accumulation of blood in the abdomen. In these cases little can be done the patient should use evacuants and live on barly water and the like. If the gall bladder be wounded its contents will escape into the cavity of the belly, causing by its stimulus violent inflammation, and always proves fatal. I believe the same happens from wounds of the pancreatic duct

When the kidneys are wounded the patient will pass bloody urine and if it escape into the cavity of the abdomen it produces death. Tho' the back part of the kidney may be wounded and the wounds heal without any inconvenience wounds of the bladder usually prove fatal when when they communicate with the cavity of the ~~abdomen~~ peritoneum but when wounded below that cavity they are attended with no bad consequence. In wounds of the joints if we are not cautious to guard against them inflammation and suppuration ensue. They should be treated with adhesive plaster. Mr Hay says stitches are not necessary if you use them be cautious ~~that~~ they do not get into the joint or else the irritation of the thread will cause inflammation of the whole joint. I saw a case where a Surgeon cut his knee with a bagnets the wound was oblique penetrating thro' the capsular ligament it was closed by adhesive plaster a long splint, a long splint was applied so as to reach from the ischium to the ankle to keep the leg

extended no unpleasant symptoms came on and the patient in about a week was well I have seen wounds of the joints were the bones have been injured and yet the wounds got well by this mode of treatment Mr Home says we should alway try to effect union by the first intention wounds of the joint should likewise be healed with the limb extended the bad effects of an opposite mod of treatment when the sides are prevented from coming together by lint may be seen in the following cases a patient who had received a wounds in the knee was treated in this manner and in consequence afflicted with fever delirium itching convulsions &c so that he could not sleep while two persons sat by him and held the limb absceses formed under the capsular ligament both above and below the joint every time when the dressings were taken away a considerable quantity of the matter together with the sinovia of the joint was

discharged

and great inflammation of the joint had to take place. This at first was a clean incised wound and after this an Oedema common but which was cured by mercurials cathartics.

This case got well however after four months.

Besides common dressings of the joints for the purpose of keeping the limb extended wounds of the joints we use a splint. This prevents the usual symptoms that occur with out this precautions such as delirium, twitching, together with the inflammation of the divided surfaces caused by the edges rubbing against each other. It should be applied so as to prevent all motion of the joint as a very slight motion of it does much injury. The situation of the limb when we effect anchylosis or when we wish it to take place will vary according to the limb affected. If it be the Elbow the arm should be moderately flexed for if union of the bones take place when the arm is

Straight

The patient will have no use of the limb so that it will be very inconvenient but if the elbow be some what bent the patient can perform many useful motions but if the knee joint is affected and the limb flexed when union takes place the patient will not be able to walk. So that in injurious affections of the knee joint should always keep extended as it will be most useful in that position the limb being brought in a right posture the wounds should be dressed with adhesive, plaster and secured by a splint and roller The patient should be bled and put on the antiphlogistic regimen purged and if necessary a blister should be applied wounds often heals easy under this ~~treatment~~ the their the their first appearance is very unfavourable. The cartilages covering the ends of bones forming joints are sometimes cut through and yet unite by the first intention From observation I have been led to conclude that inflammation

of joints does not take place so soon as inflammation from the same cause would in any ~~where else~~ other part of the body. The irritation causing only an increase of former action and a much greater increase of synovia. In large lacerated wounds of the joints such as Surgeons call compound dislocations when they must suppurate it has been ~~subject~~ disputed whether the limb should be amputated or not if it be not there is sometimes danger of mortification from the violence of the inflammation and if the patient escape this ~~and if the patient~~ by being much weakened and reduced he is in danger of Tetanus & if he escape Tetanus suppuration hectic fever and consequent amputation. At best the limb must anchylose and be rendered stiff ever after or if anchylose be prevented the cartilages will be removed and nothing but a ligature will connect the bones together rendering it perfectly useless. If attempts are

made to saw it the best application is a bread & milk poultice there is more danger of these symptoms occuring in warm weather and in persons accustomed to drinking spirituous liquors there is more danger also of the patient be an old than a young man. Pulat stiffness of the joint is owing to adhesions forming between the capsular ligament and joint or rather the ends of the bone. But there are some cases where the joint cannot return to its natural state and must anchylose. Before a joint can become anchylose the cartilages must be removed as they never unite together & shew you by what means this is affected, it never inflames ulcerates carries or sloughs off but is removed by the absorbents granulations are then thrown out from each ends of the bone ends uniting together under the joint anchylose forming but one bone. To favour this process we should keep the joint still for if the uniting parts should be torn asunder

They do not readily unite afterwards authors without being able to assign a reason for it have advised to saw off the ends of the bones this removes the cartilages and all the way without giving time for them to be removed by absorption but this is a bad practice because it causes great pain and is performed with difficulty and great danger of wounding the surrounding soft parts I believe scraping off the cartilages from the ends of the bone with a knife when the Constitution cannot bear the irritations long enough for the absorbents to remove it will answer every purpose and after much better a splint should always be used to keep the limb perfectly at rest. Of Wounds of Nerves & Tendons where a nerve is partially divided it is said to produce great pain convulsive twitchings and this was said to be the case when these symptoms followed phlebotomy but it cannot be dependent on this for no surgical operation can be performed in any part of the Body ~~wounding~~

without wounding a number of the small branches and yet these symptoms very seldom happen the inflammation and sloughing of the arm occurring after phlebotomy sometimes I shall account for in a different manner. I mention this to guard you against a terrible opperation proposed by Mr Bell which is to make a complete division of the soft parts at that place down to the bone when weakness is felt in the arm immediately after bleeding if the operation be attended with pain and it increase and become worse for two or three days instead of better then we may suppose a tendon is injured and an incision may be carried a little deeper and the nerve divided completely. But I am happy to say such that such cases do not often occur. perhaps the best symptoms of a wounded nerve is a numbness and partial paralysis of the arm below to which the nerve goes wounds of the tendons are no worse than wounds of other parts

unless punctures of the facial These are sometimes attended with inflammation of the parts beneath them which are bounds down and compressed and suppuration induces thin inflammation & w an attendant upon wounds of the facia of thigh and of the eye-lids. A blister should be applied over the injured parts and if this be not sufficient to relieve the inflammation and matter be collected underneath a full and free incision should be made to give discharge to ~~give discharge~~ the matter sometimes the tendons are cut quite through they require no different treatment from other wounds The limb should be secured in the best position the edges of the wound brought together with adhesive plaster when the tendo-achilles is divided which often happens the toes should be extended and this may be done in two ways 1st by fastening a roller to the foot carrying over the heel up the back part of the leg and securing it to the thigh or 2nd By a piece of pasteboard bent over the anterior part of the leg and secured by a roller

cure should be taken however in all cases of wounds occurring just above the heels not to make too great extension but just sufficient for the divided edges to come in contact for by extending the ties to much we throw the skin into wrinkles and bring them in contact with the divided surfaces and prevent their union This sometimes will happen from a contraction of a part even with a moderate extention of the foot turning in the edges of the wounds so that it cannot heal This we sometimes find after dressing it for two or three weeks without any symptoms of healing The skin should be turned out and kept so by the interrupted suture. When the tendo-Achilles is divided the foot should not be used for 6 weeks ———

Wounds of the Veins

The inflammation and swelling consequent on phlebotomy is best treated of by Mr Hunter in a paper upon inflammation of the veins published in the first volume of the Medical Transactions

which I shall read to you," when the symptoms be fore mentioned occurrd it was supposed a nerve or tendon was wounded and that the person was a bad operation It had been proposed by Mr Bell under those Circumstances to divide the soft parts above the wound by transverse section or incession to a considerable depth so that the nerve might be divided but this should never be done tho' it alleviates the pain and the patients have got well after ~~months~~ such treatment It should not be done because it subjects the patient too much greater danger and the alleviation of pain is owing only to the taking off the inflam matory tension of the part by dividing it ——

Lecture 6th —

Sutures. I promised in our last lecture to give you a discription of sutures at our next therefore I shall proceed with that subject the kinds of suture which I prefer are the intercepted and the twisted suture and first of the intercepted. They are nothing

made by means of a needle more than an simple stitch passed from one side to the other of the incission thro' the edges of the wound this serve draw the edges into contact and tie a knot this however should not be directly over the wounds but a little to one side and the suture is completed. — — — — — — —

Twisted Suture are effected by means of a silver wire inclosed in a steel point which can be drawn off and on at pleasure this is to be passed through the edges of the wounds from one side to the other which being drawn off the steel case that it may not hurt the patient by its sharp point and the wire remains behinds through the edges of the wounds then take a ligature and wind it round the wire in the shape of the figure 8 always decussating in the centre and drawing the edges in close contact when the wound has united sufficiently to take off the threads draw the wire autgently and the threas will come away — — — — — — —

Gun-Shot Wounds —

These were considered in the early periods as being a distinct kind of wounds the livid colour which ensued accompanied with a black slough necessitation and gangreene caused them to suppose the effect must have resulted from either a poison or from the part being burned because probably from from fire and poison being so little known and the acid Substance which they applied to them frequently caused gangreene and ~~slough~~ large slough but these wounds are now considered as so many varieties of contused wounds. If the body occasioning the wound be of a roundish figure the wound is undoubtedly a contused one when the ball goes with great velosity it occasions the death of the divided parts. The greater the velosity of the projected body the greater is the injury done to the part for sometimes the ball passes through a part and ~~that~~ surface a which it passes out always heals ~~first~~ and with less always sometimes uniting by the first intention without the formation of any slough —

The dead part formed into a crust or slough should be extracted with great care to prevent haemorrhage and we should therefore watch when it is about to slough off which is about the 10th day some persons might think it necessary to extract the slough when it became somewhat loose but all violence should ~~be~~ however be avoided if the vessels divided be large for fear of haemorrhage which frequently occurs when the parts slough off in cases of gun shot wounds when the haemorrhage had taken place at the time of the accident owing to the vessels being killed at the time by the contusion which portions of them comes away when parts slough with other dead matter it has been advised to bleed freely in these cases of gun shot wounds but I would not in all cases recommend it at first. If the ball move with a small degree of velocity it does not destroy the divided parts for these cases heal sooner when the force of the ball is weak than when the force of the ball partake of a greater velocity

because the parts are only torn Gun shot wounds require the same treatment as other lacerated wounds when the balls is lodged in the Trachea the patient performs respiration with difficulty In ~~the~~ such cases the balls should be immediately extracted to preserve the life of the patient Gun shot wounds of the Scalp are treated in the same manner generally as other wounds of that parts It is necessary in some affections of the scalp to lay it open by incission for the purpose of examining the state of the cranium. When the cranium is laid open by a ball the exposed part if it be violently contused should be removed as the contusion might occasion an abscess within the cranium these occurrences do not differ from other wounds I believe they have nothing peculiar to them. A Gun Smith who had become weary of life had concluded to put an ends to his existance; while his fellow mates were gone to dinner In order to accomplish this designe

he loaded a pistol and applied it to the back part of his head near his ear supposing that the contents would have gone thro' his head In this however he was deceived the contents did not enter his skull but took of his ear and all the contents so as to expose the bone he was however able to walk to the Hospitals and relate the whole circumstance He complained of great pain in the head. Trepanning was delayed he was seized with delirium inflammation of the dura matter came on and he died Some Surgeons advise the trepheine in all cases of gun Shot wounds affecting the cranium but I would recommend it only when symptoms of inflammation of the dura matter Supervene the patient feels most easy when the ball is extracted when the more fleshy parts are wounded if the ball be deep seated and the orifice sufficiently large for the introduction of a finger it is to be preferred to a probe for discovering the situation of the ball

because 1st the probe would not convey that accurate sensations which we derive from the finger as to the situation of the ball and state of the parts 2nd the probe would be much more liable to injure ~~the~~ and irritate the parts than the finger If the ball be superficial the wound may be dilated & and it taken out but if deep seated we should dilate the part nor use the probe Indeed the oblique course of the ball which it frequently takes renders it impossible to dilate the wound, long probes are improper for reasons just mentioned – I knew a case of a wound in the ankle where the ball had just made its escape up the leg and was found lodged above the knee the skin having prevented its escape – likewise of a wound in the chest and the ball found half round the body the best application is ~~&~~ linseed or bread and milk poultices to the part; all stimulating substances should be carefully

avoided. The treatment will vary according to circumstances. Sometimes the patient is very much depressed and weak this should be relieved by anodynes if the extremities are cold Bark wine &c may be used. Synapisms to them are sometimes useful. We commonly bleed in cases of gun Shot wounds but not always as too speedy a removal of inflammation sometimes produces Tetanus we should not bleed indiscriminately in all cases but wait till fever and inflammation come on, and if they are proportionate to the wounds they are salutary for both fever and inflammation in gun shot wounds are necessary to health. I have seen a case when inflammation was done away altogether by copious bleeding the consequence was that Tetanus ensued and the patient died when suppuration has taken place we may use the bark with invigorating diet. If neither fever nor inflammation supervene we may continue them but if these were we must

have recourse to the antiphlogistic regimen — —

In gun shot wounds we must treat them according to the nature of the case or injury done If the bone be fractured we must treat them like common fractures or such fractures occurring from other causes It is necessary in all wounds of the Thorax to bleed as they are always accompanied with more or less inflammation I have taken 186 ℥ in 14 days and as the patient recovered Blisters applied on sometimes of serious If the spine be wounded it occasions a paralysis of all the parts which receive the nerves below the parts injured If the cervical vertebrea or marrow above the phrenic it occasions a paralysis of the diaphram, and the patient immediately dies If it occur below the nerve the patient may have life for several days but most commonly dies in a bout 4 or 5 days wounds of the abdomen are injurious according to the viscera injured in wounds of the liver I would recommend large bleeding. If the gall bladder be wounded the patient is afflicted with great depressing

and the bile makes its escape out of the orifice into the cavity of and violent inflammation ensues and the patient dies. wounds of the stomach are mostly fatal The patient is affected with depression a disagreeable, sensation nausea and vomiting of blood a patient who had been taking a hasty draught of porter received a wound in the stomach which situated equally distant from the sternum and ribs the porter in part came out of the orifice and part ~~part~~ was effused into the belly which was puffed up in the Hypogastric region The patient complained of great pain and finally died. The edges of the wound in the stomach united by the first intention and no sign of inflammation of the stomach appeared I believe he would have survived the injury done to the stomach and other parts if inflammation of the peritoneum had not taken place in consequence of the contents of the stomach being effused into that cavity

Wounds of the bladder prove frequently fatal Slightly not owing to any delicacy of that viscus but to the urine passing into the Cavity of that viscus the peritoneum and causing inflammation therefore we often see the neck of the bladder divided without any bad consequences in all cases rest is a necessary part of the cure the patient should keep very still & his foods should be mild and opening Blisters should be applied to the abdomen fomenting poultices may be applied with success to the belly and the wound should be closed by an interrupted Suture when Situated in the abdomen when a bullet passes through a joint it is very apt to injure the ends of the bones composing the joint when this is the case there is a great deal of danger. If Hectic fever Supervene amputation becomes necessary but frequently the wounds partakes of a lacerated nature and sometimes unite by the first intention —

when amputation becomes necessary I would recommend it to be done immediately It because by this means hectic fever does not come on, the avoids inflammation, delirium, cold sweats, frequent pulse. And ~~and~~ because the patient is more willing to submit to the operation if performed immediately ——————

Lecture 7th.

Ulcers.

I have in my former Lectures to give an Idea of the definition of ulcers They are a very frequent occurrence in the practice of medicine It behooves those who attends at Hospitals to attend to the appearance and cure of ulcers give a knowledge of this appearance and treatment Constitute a principal part of the practice There are two methods of Cure

1 By nature and

2 By the assistance of Art ——————

as to the causes of ulcers they are of little or no consequence to the surgeon the manner of treatment being the only thing necessary to attend to to the healing of ulcers there are but three im. Judements 1st Whatever injures the Constitution 2nd Obstruction 3rd improper dressings I shall begin with an ulcer in the healthy Constitution and shall confine myself chiefly to the ulcers of the legs. In the healing of an ulcer the first process is the detumescence of the edges next granulations raising the surface to the level to the levels of the Contiguous parts These granulations appear first in little red points and spots are covered with coagulable lymph the pus is secreted of about the consistence of cream. All healthy ones are of a red colour or of a bluish white by the subsiding of the inflammation the sides of the sore are brought near together an astringent effect in the tendency the granulations have to unite with each other. This process of contraction diminishes the surface of the sore and consequently

lessens the extent of the disease this power of contraction is very fully exemplified in glandular parts as in the extirpation of scirrhus treads the skin which is thrown into folds resembles nothing more than the consequence of contraction I have seen it thrown into folds resembling those of a purse at the mouth by a drawing string The next occurrence after the granulating parts are brought on a level with the olds skin is the production of a new one the granulations adhere to the edges of the sore from which it commences The new skin which is of a whitish colour on which the cuticle is formed at the same time and the new skin is continued over the sore This new production is larger and old ulcers is not confined to one plan alone but is found in many parts constituting small lines or spots on the surface of the sore like little Islands In the Treatment we may apply dry lint to the sore which will absorb the juice and keep it from

becoming dry and irritating soft-dressings which may be spread with a little serate or nut- should be applied over it and confined ~~over~~ it with a roller which should be slightly or loosely else the lint will be too much pressed into the granulations under this treatment they will soon heal up forming a cicatrix. ~~Mr Barnet~~ Mr Bayeton has advised to approximate the edges with adhesive plaster which will very much expedite the cure if the ulcer happen on any cutaneous part it is necessary to shave the hair before we apply the adhesive plaster care should be taken not place them so as to cover all the surface of the sore as we should by that means prevent the evacuation of the pus the parts contiguous should be pressed over any to throw out the collected matter If the dressings stick they may be wet with a little cold water previous to the time of dressing by which also the heat and inflammation of the sore are alleviated.

The process of granulation is assisted by drawing the skin over the sore. This not only lessens the extent of the sore but likewise supercedes the necessity for the formation of much new substance, which is always more tender than that newly formed. It sometimes happens that the sides of the wound will not unite when approximated. They should then be washed with spirits or touched with a little blue vitriol lunar caustic or any other escharotic powder which has been found useful. If these remedies fail the surface of the sear if small should be exposed to the air to dry and form a crust under which a new skin will after form and when the crust comes away the sore will be healed. It sometimes happens that the flow of the pus is so great as to prevent the adhesion of the sides so that the sore cannot close an astringent wash entirely obviates this for this purpose I use a wash of vitriol, allum, salt, sal in a pattens of mine which immediately stops it adhesive inflamma cume on and the patient got well in a few days. In healthy constitutions seldom demands

the need of a surgeon. The blood vessels are more firm and vigorous and capable of carrying on a healthy action in the extreme greater action must necessarily takes place in vessels of the lower part of the body than in those in the upper part of the body to support the impelling circulation or column of blood and to counteract the effects of gravity hence the vessels of the newly formed granulations being weaker than those originally are unable to support the column of blood when we walk or stand erect and this is the reason why in ulcers of the legs the blood sometimes bursts the vessels In others tho' the ~~part~~ vessels do not give way the parts are too weak to carry on the circulation and the parts become of a livid colour owing to the stagnation of Blood By a rupture of the vessels the inflammation is increased and the sore discharges a bloody serum In this state the parts may be stimulated with spirits camphor and even alcohols.

If the vessels become varicose use a roller When a rupture of the vessels takes place a mucous or bloody serum is thrown out which acts as an irritant to the new and tender granulations Inflammation comes on and the secretion of pus is diminished & this discharge is not seen but all stop to the granulations though yet the symptoms return and the vessels are enlarged The best cure is a horizontal position the patient should be confined on his back in bed and kept perfectly at rest when this cannot be accomplished a bandage should be applied which is the best cure in ulcers of the legs it prevents over distention of the vessels Bandages are of three kinds 1st the laced stocking strips of leather crape of muslin, & linen spread with adhesive plaster the cotton are preferable ~~to~~ a laced stocking ~~stockings~~ would answer every purpose but it is too difficult to obtain

The use of the bandage is when we walk to prevent the vessels being stretched too much by the return of the blood. The second impediment to the cure of Ulcers is Oedema this is preceded by adhesive inflammation which forms the basis for the granulations ~~of the cells~~ by uniting the cells of the cellulosa the watery part of the blood is thrown out into the cells of the cellular membrane distringing the sides of the sore and putting the vessels upon a stretch but being rendered compact by the adhesive inflammation ~~cannot~~ cannot give way to the distending force which presses against the granulation and if the distention be long kept up they will be apt to slough off Oedema generally subsides a night and the injury done during the day is repaired in this way it will often continue sometime while the Oedema continues discharging by day what is renewed by night. For the Cure lest time

and a horizontal position are necessary if this is not sufficient a roller must be applied some authors advise the patient to take a degree after the application of the bandage it is certain the parts will heal speedily under this treatment - but I believe much sooner if the patient is kept in quietude The situation is a matter of great consequence The bandage should be applied in the morning before the patient rises and consequently before the legs swell - The third impediment is that which some surgeons call dressing to the bottom it is by pressing lint or other substances to the bottom of the wound This is a very hurtful practice as it must send the uniting vessels and parts and keep them asunder and consequently prevent their healing all such dressing are precisely are precisely in the same way as a pea in an Issue I might next mention that all stimulating salves

are to be avoided they either bring on an inflam
mation or by their acrid quality act as corrosives
by the removal of these unnecessary dressings en
ful the sore in a state of healing This way of
dressing to the bottom was the ancient way of dress
ing fistula in ano — Whatever impairs the Constitution
independent of specific diseases is an impediment
to the cure of ulcers The use of Spirituous Liquors
acts in this way as we ~~frequently~~ see ulcers in
people who are frequently Intoxicated very difficult to
heal Hot or Cold wheather retards the cure of ulcers
fevers are hurtful the febrile action sometimes
cures ulcers I have seen ulcerations as large as
as the palm of my hands after resisting other
treatment for 6 Months cured by a fever in 3 days
the simple strength of the Constitution has been sup
posed to have an effect on the cure of ulcers
Observation proves the truth of this in general as
the parts are able to go thro their operation

better the I think I have seen them heal equally well in both constitutions. I shall speak now of the different kinds of old ulcers and under the following heads 1st Inflammatory Ulcers

These are known by their pain and sore inflamed edges and are accompanied with an increase of heat in fits changes or instead of pus they discharge some thin serum and other matter which has a purulent appearance and coagulates over the surface of the sore adhering slightly to the granulations ———

Treatment If there be much inflammation Blood-letting purging &c are necessary Bread & milk poultices are the best applications to the part and the patient should be kept in bed When the patient is too weak to admit of evacuations and the ulcer is on the leg the foot may be raised to favour the return of Blood this acts as a local depletion and without depriving the constitution of blood ———

I have this accellerate the immediately cure when the inflammation has subsideds it may be considered and healed as a simple inflammation or as a simple ulcer in a sound part. 2nd Fungus ulcers these have large granulations with sounds lips which are above the surface of the other parts and have no dispositions to heal or to form skin and are sometimes possesed of great sensibility and bleeds from the slightest touch In others they have little or no sensibility. Treatment. These may be treated with a simple compress and secured by a roller which presses the granulations together and prevents the growth of fungus if this is found sufficient the excescence may be destroyed by Lunar Caustic astringents sometimes answer the purpose – 3rd Oedematous Ulcers In these there are extravasations of serum into the cells of the cellular membrane. The granulations become of a purple colour if the patients strength be much reduced examinations will be improper

The Oedema can frequently be brought down by strips of adhesive plaster and raising the leg to a horizontal position If this does not answer it may be remedied by means of a roller which should be wound from the extremity upwards

II Ulcers. Slowing Ulcers. In these the slowing frequently arises from a weakness in the granulations In some old ulcers when the granulations have arisen to a level with the sound skin they become of a black colour Mortification ensues and the parts slough sometimes does not stop even at the edges of the sore but goes on sloughing at one part while the skin forms at another in general the mortification takes place over the whole surface of the sore

This is generally attended with febrile symptoms but if the granulations die thro' weakness they should be dressed with poultices combined with Laudanum. The part is generally very sensible to the touch Ulceration sometimes comes upon both legs at once one breaking out whilst the other heals

This proves that it does not depende on the weakness of the Constitution or both sores would be affected alike In these cases we should use Bark opium nourishing diet, when the mortification has stopped carrots grated and boiled in milk may be applied to correct the factor The fermenting poultice mixed with powdered Charcoal may be applied sometimes while the mortification while the mortification is going ~~in~~ ~~on~~ on extensively in warm weather especially maggots may be formed in the dead parts to obviate this the dead parts are to be washed over with nitric, or muriatic acids diluted with an equal parts of water after the slough has separated employ the common treatment. I shall now speak of ulcers which not unfrequently occur in weak constitutions they generally look with affirs The granulations form rapidly fade, generally rise to a ~~low~~ level with the true skin But our hopes are soon frustrated for the granulations soon change their appearance and become of a purple Colour and a part of them are —

removed by ulcerations The patient should have nourishing diet and take the peruvian bark cold water may be poured over the sore for the space of 4 minutes every Day a weak solution of lunar Caustic put upon lint and applied has proved useful or a tin ointment lint dipped in a solution of oak galls to which Laudanum was added and applied to the sore have sometimes cured ulcers that have resisted all other remedies. 5th. Indolent Ulcers — when nature has been frustrated frequently in her attempts to form a cure the parts become indolent have no disposition to form a cicatrix and when the inflammation is reduced the edges remain in a callous tumefied ring in consequence the coagulable Lymph not being absorbed when inflammation is removed

Treatment The best plan of treatment is to remove the callous edges after the inflammation has subsided and so change the disposition to the same nature as a sore from an accident this may be done either by the knife or by caustic or it may be done in another way —

viz by means of bandages and pressure Mr. Bayn
lone says the adhesion plaster will mostly
answer. When the caustic is employed we
should persevere to the middle of it to the mid
dle of the sores and sometimes it will be ne
cessary to apply it over the whole surface of
the sore until the ulcer puts on a healthy ap
pearance taking care after it begins to heal not
to apply it near the edges or we shall by
that means destroy the granulations, and pre
vent the cure making the ulcer bigger under
this heads I shall speak of mercury —
Mercury is sometimes very useful in the cure
of sores given in small doses but if this is found
insufficient we should increase the dose suffi
ciently cause a gentle ptyalism The tincture of
Myrrh is sometimes used or we may apply a
solution of lunar caustic to the part or it may be
sprinkled with red precipitate Ung.t Citrinum
A. th Carries Ulcer here the dead parts of the bone
become a stimulus to the absorbents to separate
the dead portions. I do not pretend to enter into

a discussion of the causes which produce exfoliations of the bones. But I may observe that as soon as any portion of bone becomes loose it ought to be removed immediately if possible but when the bone is situated in the more fleshy parts it is difficult to determine whether it be loose or not. especially if the piece be large it may however be discovered by the introduction of a probe if the bone be tight no pain will be felt in pressure with the probe but if the bone be loose great pain will be caused by a little motion in consequence of pressing the dead part upon the new and tender granulations if blood follow we may believe the dead portions to be loose in order to extract it it will frequently necessary to make an incision down to it for the extraction of the loose portion a sponge lint often however often answers to dilate the orifice very effectually This should never be delayed when practicable to remove it for granulations take place forming a substance nearly of the consistence of bone —

which emaing the dead parts prevents its removal because it we divide a vessel in so hard and callous a part it will be very difficult to take it up. To avoid this danger it is better to break the bones by a pair of strong nippers after which the pieces can be readily extracted in a case of carious ulcer of the lower jaw which irritated the Masseter muscle to contract so that the mouth was kept closed Cartilage was formed in the same manner so that the jaws could not be opened occasioned by the carious bone. The Surgeon not understanding the cause sent the patient to the City to have it dissected supposing that an adhesion had taken place.

7th The seventh species are caused by varicous veins and very much resemble ulcers of the indolent kind. The vena saphena most generally becomes varicous and prevents the ulcer from healing. They may often be remedied by a tight bandage or stocking but this is necessary to be continued so

long that the patient is compelled to leave siege, if so soon before the cure is completed. This may be suspended by an operation performed by tying a ligature round the vein so as to take off the coloumn of blood. This practice was first revived of late years by Mr. Hunter and afterwards by Mr. Home. I shall read you the treatment proposed by Mr. Home. In performing the operation he recommends the patient to stand on a table on which is a chair and lean over the back. In this way the veins will be completely distended with blood and the ham will be at a convenient height for the surgeon. But in this way it is difficult to get the light to fall on the part very often and the patient not knowing the degree of pain attendant on it is mostly restless and discontented. I therefore apply a tourniquet on the thigh so as to compress the veins without affecting the arteries by which means they become distended and the operation can be easily performed. The vein

may be tied up in the groin in order to do this the surgeon must pinch up the skin on one side of the vein and an assistant on the other the skin so raised is to be divided over the vein with a scalpel which will sufficiently ~~divide~~ expose the vein a silver needle with a blunt point is to be arranged with a ligature passed round the vein and the patient placed in a horizontal position before the vein is tied to free it from all the blood I apply a small piece of lamen ray over the vein directly under the knot formed by the ligature so that when the sides of the vein have united the ligature may be cut away without injuring the vein In common the ligature may be cut away the 5th day the ligature will generally come away about the ~~too~~ 9th or 10th day but it is not necessary it should remain so long after the ligature is secured the edges of the wound may be brought together by adhesive plaster and a pledget of lint applied

so as to press on the vein above and below the the ligature If the vena Saphenas be divided both branches of it must be secured sometimes both branches of the vena Saphenas are affected and and require to be tied but it will not be necessary to tie both when one only is affected

8th. The eighth species are caused by local or constitutional circumstances and continued by a peculiar diseased action as venereal ulcers Scrophulous. Cancers. &c.

These may be remedied in two ways the 1st which are entirely local may be cured by cutting the diseased part out with the knife but if one specie is left after the operation as in venereals bad cancer and &c -- the parts spread like a ring worm and require the frequent use of caustic 2nd. when the continuation of the ulcer depends on any constitutionality as injury that injury must be removed before the Ulcer can be healed -

Lecture 6th.

Fractures.

A fracture is the complete solution of continuity of a bone occasioned mostly by external violence but this is not however always the case because the patellas is sometimes fractured in consequence of muscular extension alone and the humerus is sometimes fractured in the same way —

Bones are s.d to be more brittle in frosty weather because slight falls in frosty weather produce fractures and therefore more easily broken in cold weather than in warm. but in other circumstances the muscular contraction of the muscels easily contributes to this end the muscels contract with vehemence and a sudden slip or fall occasioning them to act with greater violence frequently produce — fractures. This is proven by intoxicated persons who seldom breaks any of their bones in slipping or falling which is owing to a greater relax

ations

of their muscels if a bone be broken obliquely it occasions great pain on account of the sharp edges of the fractured extremities piercing the soft parts and causing convulsive action in the muscles and when cured the limb is frequently shorter than the other owing to one point of the bone passing over the other The limb readily admits of flexion of the injured part and is often distorted. Fractures are either simple or compound a simple fracture is when only the bone is broken without any external communication a compound fracture is when there is a division of the surrounding parts so as to admit of external communication with the cavity of the fracture if the external communication be small it frequently heals by the first intention similar to a simple fracture and has been termed a compound simple fracture

Simple Fracture In the treatment of simple fractures of the extremities the limb should be placed in a state of relaxation, and the ends of the bones into their exact positions In gener ale the convulsive action arising above mentioned ceases when the limb is reduced This in gener ale is easily effected but when it cannot be accom plished by the ordinary means the patient may be bled ad deliquium animi If inflammation supervene it should be reduced by bleeding and the antiphlogistic regimen as purging is very inconvenient it should be employed just sufficient to keep the bowels open The limb should be kept in its position by means of splints and bandages Splints are stiff firm substances and are of 3 kinds wood, leather and whalebone or pasteboard of these the last is preferable becaus they can be moulded ~~into~~ of any figure by wetting it in hot water and adapting it to the parts when dry it main tains its figure we are very often not called to the

several days have elapsed and a considerable degree of inflammation and swelling have taken place this should be reduced before we attempt the reduction of the limb by bleeding, low diet and the application of lead water poultices as union does not take place as when much inflammation is present. I may here venture to propose this as a general rule that at the end of 8 or 10 days after the first dressing we should always examine the parts if any displacement has taken place and do an alteration be necessary you make as much as you please the patient should be kept to low diet and evacuations by vena section in proportion to the inflammatory symptoms if the patients constitution be unhealthy or weak it may not be necessary to evacuate at all the dressing at first should be a loosely applied or else if the limb swelle the circulation may be stopped and so produce mortification

The time necessary for healing the fracture depends on the constitution age and peace of fracturing. likewise upon the size and situation of the bone the bones of young people heal sooner than those old fractures of the jaw or ribs heal sooner than those of the fibula The bones in some constitutions does not unite firmly at all but forms a kinds of joint and in fact the ends of the bones are sometimes tipped with cartilages and have a sort of capsule an instance two cases of fractured legs of this kind were cured in this Hospital by moving the broken limbs so that the extremities of the bones rub against each other. This was effected by causing the patient to support himself upon crutches and moving about to bear as much weight as possible on the injured part which irritations seemed to cause the process necessary for the formation of bone into action this method very much ameliorated the union The adhesive inflammation is produced coagulating

lymph is thrown out which soon becomes vascular the cartilaginous unit cavity forming time its diff. Mr Hunter says when the bone will not unite we should make an incision down to the bone but does not tell us of his ever having had a case. It has been recommended to make an incision down to the bone in such cases and to implate the fractured ends. In the same manner as recommended in wounds of the joints, but this is a very dubious, painful and terrifying operation and cannot be performed in all cases as in fractures of the leg and forearm I would rather advise a seton between the fractured ends of the bone which is ~~the~~ a much simpler methods attended with much less pain? less inflammation? and can readily be performed in any situations I have performed the operation in this manner with very good success

It was done by passing a needle armed with a skein of silk between the divided ends of the bone this by irritating the part caused suppuration and granulations made in 12 weeks time the patient complained of much more pain in bending his arm at that part these granulations soon united leaving only the small hole of the seton which healed up in a few days after it was removed in old people it should be kept in for a long time for it appears to me that the soft parts round the bone begin to form first into bone Simple fractures mostly unite by the first intention union of bone requires more time than union of fleshy parts the coagulating lymph first becomes vascular the cartilaginous and then bone In this way the substance called callous is formed which being of larger diameter forms a tumor round the bone at that place. but it

generally diminishes becoming less and less till it differs little from the bone itself at the first the granulations are full of vessels If the wounds be simply inflamed union by the first intention takes place suppuration and granulations supervene and the granulations when examined are found to be vascular only at the extreme point the other parts being of the nature of bone —

Compound Fractures

The first bonds of union is lost in Comp. Fractures as the blood which effects that union escapes the external Orifice Comp. Fractures sometimes partake of the nature of simple incessions but much oftener however they are punctures or lacerations or Contusions or the fractured ends of the bones being blunt so as to tare the soft parts again the soft parts are very much bruised and the bone is broken into several pieces by the

mechanical force applied as when it has been run over by a waggon or any heavy substance falling upon it Fractures may be transverse obliquee, longitudinals, or spirals compound fractures are attended sometimes with profuse haemorrhagy when much blood flows from the wounds we should apply a tourniquet on the principal artery when the blood is thus stopped we should next determine whether the limb can be saved or not If it be so torn and bruised that the circulation cannot go on to the extremity amputation must take place it may be done immediately. or you may wait till the soft part slough and then amputate the bone If amputation be necessary I would prefer it immediately as we sometimes by that means prevent Tetanus and likewise the patient is generally more willing to submit to it In amputations sometimes considerable haemorrhagy takes place

from the medullary artery Dr Gooch mentions a case in which the stream of blood flowing from the medullary artery in the tibia was equal in size to a crows quill and as it ran in a bony canal in the tibia he proposed to make two perforations near the ends of the bone with a small trephine which was agreed to and the artery was laid bare by this means and secured by per pendicular pressure but I have found in amputation of the medullary arteries the column of blood effectually stopped by a cedar plug fitted in beside the artery so as to press the orifice completely together - and left so for 8. or 10 days until an union of the sides had taken place if the bleeding take place from any part of a compound fracture in the leg and cannot be stopped by other means the femoral artery must be taken up when the inflammation is great it demands our attention for if the inflammation is suffered to run on to the suppurative stage the patient will be greatly

weakened by the discharge of matter his constitution becomes much irritated and Hectic fever comes on When the discharge is copious and Hectic fever takes place amputation is advisable

Lecture. 9th

Fractures. In compound fractures we should endeavour to remove the splintered portions of bone When they can be discovered if it can be readily accomplished but if the pieces are attached so as to occasion much pain in extracting them we must omit it till the process of exfoliation takes place completely It sometimes happens that the external communication is very small so that the blood coagulated in the orifice completely stopping it up renders the cavity perfect so that the bone unites as in a simple fracture but if ~~it~~ through too much offensiveness with a view of assisting nature the surgeon should be very careful to wash out the coagulum the fracture would be rendered a

compound one and go through with the process of suppuration and granulation if the external orifice be very small a portion of any lint may be bound on it which will become wet with blood and form a seat after the bones are reduced when the ~~edges~~ ends are not splintered the edges of the wounds should be brought into contact and secured by means of adhesive plaster I had a case of compound fracture of the tibia where the ends of the bone had made their way thro the contiguous parts the incision was an inch and a half in length notwithstanding it united as a simple fracture and the patient got well in about 6 weeks if the inflammation run too high it may terminate in Mortification To prevent this occurrence from inflammation we should bleed and apply bread and milk poultices The bleeding should be practised as it is indicated Some Surgeons are fearful of large evacuations at first on acct of the copious discharge that takes place fearing they shall reduce the patients system too much

not recollecting that the inflammation that succeeds it is the cause of the discharge of matter But it necessary to distinguish between mortifications caused by inflammation and that which proceeds from weakness If it be occasioned by weakness, Opium, bark and wine should be administered. If mortifications be brought on by inflamations in Compound fractures a bubo it will here be necessary to distinguish between that mortifications which is produced by the part being killed in consequence of the violence applied and that which is the effect of inflammation induced by the violence, as the parts in the first having lost their life must necessarily slough Bones cannot bear a greater degree of inflammations without loosing their life

C, Particular bones and first of the bones of nose these bones tho' not as frequently as the others are nevertheless sometimes broken some times the fragments are pushed into the nose which occasions a difficulty of breathing when

in this manner they may be reduced by introducing a narrow Spatula, or something of the kind into the nostrils and when reduced it may be retained in its place by a Gumelastic Catheter if necessary. If they project outwards they may be kept in their place by applying a Compress or after they are reduced they may be kept so by means of Leather Straps spread with adhesive plaster. If the soft parts are injured apply bread and milk poultices — Of the Lower jaw Fractures of the Lower jaw occur sometimes at the symphysis but most commonly at one side and in one side only they sometimes happen in both They occur mostly between the chin and processes The Corronoid processes ~~or~~ are seldom or ever broken because they are so well defended by muscle and Zygoma and I never saw but one fracture of the Condyles we can easily tell when it is broken tho' the fragments be ever so little displaced by rubbing the finger along the bone it will occasion pain and the patient cannot press the jaw against the other

When the fragments are displaced if we look into the mouth the rows of teeth are uneven when the fracture is on both sides the digastric muscle will draw down the symphysis while the temporal muscles draw the angular parts upwards ———

Treatment Some Surgeons advise pieces of pasteboards to be applied on the jaw to keep it in its place, but the upper jaw acts as a splint to which the lower one may be affixed by a roller apply the teeth directly together having the rows accurately over each other and confining the jaws with a roller that which is mostly advised is one with four heads applying the body of the roller over the anterior and under the fore part of the chin then drawing two heads upwards directly over the top of the head and the other two heads from the anterior part round the occiput and forehead alternately I prefer a simple roller it will answer every purpose the patient should be kept on spoon foods and forbidden all conversation and should not move his jaws for several days the dressing should

should be continued for about the space of three weeks by which time union will take place but unfrequently the teeth are loose and under this circumstance authours have advised to extract them this should never be done for fear of making a compound fracture of a simple compound, fracture of the lower jaw and mostly accompanied with a death of the ends of the bone

Bones of The Spine

When the processes of the spine are injur'd the consequences to be apprehended are not very serious when the spine is wounded there is always an extravasation of blood from the vessels of that place which extravasation presses upon the spinal marrow some have advised to make an incission down to the bone to discharge this effusion but it is very uncertain whether it be posterior or anterior to the spine if the latter it cannot be of any use I should not advise it when the injury takes place in the neck above the third vertebra

which it most commonly does the patient shortly dies (about the third day after) a paralysis, a palsey of the lower limbs comes on and likewise on the bladder so that patient cannot void urine nor scarcely faeces and breaths with difficulty as it is only the diaphragm which carries on respiration it is dangerous to lay the patient on his face for any length of time as thereby the pressure on the abdomen would force the abdominal viscera upwards and prevent the descent of the diaphragm. If the injury happen lower down the patient may survive a longer time but I never a case of the kind from which any one recovered. The patient is compelled to lie on his back and the parts on which he rests mortify when injuries of this kind occur in the neck distensions has sometimes proved serviceable tho this is almost always of no service yet for the satisfaction of friends of the patient we may put it to trial To effect this we should pass two bandages round the head the other from the occiput

wounds the fore part and secure them together an instrument is then formed (fig 1 in the plate) being expanded within it rests upon the shoulders and having a screw at the top and a hole in the piece directly under the screw to admit the ends of the bandages in this manner the extension is made against the shoulder (pre viously having put a pad upon each) by shorten ing the bandages in consequence of by turning the screw above The patient at the Hospitals appeared to die from mu cus collected in the Trachea and obstructing res piration owing to the weakness of the expiring forces Another Method by tying the feet to the foot of the bed and hands to the head of the bed and having a hole thro the bottom of the bed opposite the arms for a convenience

Lecture. 10th

Bones of the Pelvis

The bones of the pelvis are very seldom fractured owing to their very great strength yet I once saw the dorsum split through.

The patient in very great pain cannot stand up a sensation as if he were falling to pieces upon motion of the parts - the crepitus may be felt or perceived

Treatment all that is necessary to be done is to confine the patient to one position and that should be the most easy and to pass a roller round the Pelvis

Fractured Ribs

The ribs are seldom fractured individually sometimes four or five are fractured at once The most common cases of this fracture are falls or substances falling upon us I have seen many from the falling of masses of dirt

Fractures of the ribs are commonly attended with great pain. when the patient takes a long inspiration a hacking cough is mostly a concomitant symptom by applying the hands on the side, when the patients cough the crepitus may be felt and if the lung be wounded the patient expectorates bloody mucus and air passes into the cavity of the thorax This when it takes place in a small degree is of no consequence. There will be a small degree of irregularity or angle at the place of fracture if you press on the angle it is of an irregular shape and gives a crakling noise Sometimes a swelling of the body takes place called emphysema it is occasioned by the air passing from the lung into the cavity of the pleura which at every expiration passes into the pleura & cellular substance. and sometimes makes its way over the whole body. When the emphysema is partial a Cloth wet with brandy may be applied to the emphysematous parts and be confined by a roller Dr Hunter has published

an account of the treatment of such cases in the 2nds vol. of the London Transactions or observations which I would advise you to read. It sometimes becomes necessary to make a puncture into the cavity of the pleura to discharge the air when this is done it should be made between the sounds ribs midway between the sternum and spine or else we may let the air to the fractures and ~~an~~ convert it into a compound one. for tho it is already a compound ~~fra~~ fracture yet it frequently happens that the wound in the lungs is so small that the bone unites like a simple fracture. The air in the cellular texture may be let out by puncture if it becomes necessary tho' it never produces inflammation as I showed when treating of wounds In the treatment of fractured ribs a wide bandage should be passed round the ribs or Thorax so as entirely to prevent the motion of the ribs if great inflammation supervene treat it like peripneumonia

purging is attended with inconvenience besides bandages should be passed round the thorax to prevent their slipping down. For the cough which often remains, sometimes the patient may take a Spermaceti Mixture or a Solution of Gum-Arabic in water combined with a portion of Laudanum sometimes small doses of liquid Laudanum are very serviceable In about three weeks union will have taken place between the fractured ends of the ribs.

Of Fractures of the upper extremities

And first of the Clavicle the clavicle is most generally fractured about the middle and it generally slopes from the scapulas downwards When it is broken in the middle a displacement of scapular fragment downwards and forwards takes place with seldom any displacement of the internal parts the former being most commonly below the latter the weight of the one causes the first and the pectorals muscles the latter

With respect to the length of the bone it shortness may be attributed to the shortness of the pectorals muscels If the Clavicle be broken within the Ligament at its connection with the sternum, inasmuch it cannot be displaced and is frequently overlooked by the Surgeon This circumstance should be well remembered for by being over looked the little motion it is allowed may prevent its healing and produce an abscess and thereby cause a compound fracture. But if it be broken in the middle it the empitus may be easily fitt by causing a motion of the arm a patient with a fractured Clavicle cannot raise his arm and likewise the shoulder on the side with the injury will be much lower than the sound side Treatment The treatment of fractures has been greatly improved by Mr Desault, formerly Surgeon

in cases of fractured Clavicle to set the patient on a stool and cause an assistant standing behind him to place his knee between the patients shoulders and take hold of the shoulders with his hands to pull them back for the purpose of making the distension compresses of tow were then applied under the arm a bandage was passed round over the shoulder and under that of the other in the form of the figure 8 and the patients hand supported in a sling but in this mode of treatment there is nothing to prevent the pectoral muscle from drawing the scapular fragment under the Sternal one I believe this is the present treatment in England This method however is of no service and attended with one great inconvenience viz extension of the axilla I shall now speak of Desaults methods to prevent the scapular half or part from passing between

the sternal one, a pledget should be applied under the arm and secured by a roller. This roller should be passed several times round the body. To prevent its slipping down the pad enables the arm to act as a lever to the clavicle and effectually prevents one fragment from passing under the other. The pad may be of muslin or flannel. The latter answers best or of horse hair wool &c an other bandage is to be passed round the body over the arm drawing the elbow close to the body & to keep up the extension of the clavicle it may have one or two turns under the axilla to support the weight of the forearm or a strip may be passed round the wrist and pinned to the other bandage to support its weight a piece of soft linen or flannel should be placed between the wrist and body. The weight of the arm should be supported next, for this purpose

an assistant should take hold of the elbow and push the arm upwards this done a bandage is to be passed round in form of the figure 8 beginning as follows viz. lay one end on the breast pursue the fractured bone under the elbow and over the same bone again then across the back under the opposite axilla across the breast and so over the fractured bone again pursuing the same course as before we should then feel the pulse to see if the circulation goes properly on the bandages should be continued about four weeks by which time the union will have taken place that I would advise to continue them one week after this as the union would consequently be very weak

Lecture - 11th

Of the Scapula. The symptoms of a fractured Scapulae are a drapping of the shoulder pain & crepitus. The acromion process is sometimes fractured tho not often but when ever this takes place it is to be treated exactly after the same manner as a fracture of the Clavicle It may be replaced by pushing the arm upwards the forearm may be bent on the humerus and the bandages passed as be fore mentioned the dressings should be continued about 3 weeks I have never but one seen any other part of the Scapulla fractured and that was nearly at its angle and fractured from its base nearly to its inferior costa and when the scapulla moves the fragment remained still. When fractures of this part of the Scapula occur and when the lower angle is broken off it is drawn a little

downwards and forwards by the action of the serratus major anticus muscle and cannot be pushed upwards while the scapulae is drawn upwards by the teres major to remedy this the hands should be brought forwards to the other shoulder which draws the scapulae round so that the broken edges will come in contact with that of the fragment bandages should be passed round the arm and shoulder to secure the motions of the arm and keep it in this position and to prevent its rise in the scapulae. ---

Fractures of the Os Humeri.---

This bone is mostly broken about its middle when fractures happen about this plan there's no difficulty in ascertaining there situation the patient cannot raise the arm nor use it in any degree it likewise bends in any direction and if extension be made the Crepitus will readily be felt an assistant should

sizes hold of the condyles bending the elbow and drawing a little way from the body to the muscles in a greater state of relaxation another assistant should take hold round the patient under the axillae to make a counter extension or take hold of the opposite arm The surgeon should take hold and place the ends of the bones in contact. This being done a roller should be applied round the arm from the elbow to the shoulder the length of the splints it should be pretty tight making a moderate pressure tho not so tight as to stop the circulation The splints are sufficient to keep the fragments in their proper situation these should be of pasteboard The splints are to be secured by another bandage The forearm now remains to be supported this is done by a sling or by passing a broad roller round the body having previously made a compress or pad to apply under the arm for the purpose of making the side level

for the support of the arm the bandage for the support of the forearm begins at the opposite side passing under the hand ~~around~~ over the elbow round the body and then pursuing the same course again at the end of ten days we should examine the limb this union at this time will be so soft that if any displacement should have taken place it may be easily reduced by the end of 4 weeks we may omit the bandage gradually If the forearm swells much we may wrap the bandage from the fingers ends this is seldom requisite Sometimes the Os Humeri is fractured near its head the patient complains of pain upon any motion of the arm pressing the arm against the side causes pain the lower fragment is increased towards the thorax in most cases I never saw a case when it was either before or behind it if it be increased the elbow stands off from the body

if outwards the elbow bends inwards to the body when the lower fragment is inwards towards the thorax a pad should be applied close upon the axillae between the arm and side to keep the bone in its right situation Fractures near the heads of the Os Humeri have sometimes been mistaken for luxations and by trying to reduce the supposed luxation much mischief has been done by irritating and ~~wou~~ wounding the surrounding soft parts so as sometimes to produce suppuration This mischief may readily be avoided by placing the fingers in the axillae where we shall be able to feel the fragments instead of the round head of the bone Sometimes when the lower fragment keeps its situation and the patient cannot rise his arm we are unable to take the precise plan of solution but by extension and counter extension being made the crepitus may be felt on bending the arm

It is of great consequence to ascertain whether the humerous be luxated or fractured for if the latter and lower piece be outwards the patient cannot rotate his arm when it is healed in this manner. ——— ——— ———

Treatment of fractures of the bones begin the bandage at the wrist and winds it to the shoulder after the extension and counter extension shall be made the splints should then be applied two of them will be sufficient if they be broad but three if they be narrow applying one before another on the upper side of the arm and one on the hinder parts of it these are to be secured by a roller the lower fragment is best kept out by means of a pad made of flannel folded up and placed under the arm this answers the place of a splint this being done the arm is to be bent at the elbow and secured by a broad roller as a sling admits of too much motion

In about 4 weeks it will have united the we should examine it in about ten days by which time the echymosis which frequently appears in consequence of the blood-vessels being injured by the broken fragments will have completely subsided and we are the better enabled to judge of its situation I once saw a case where there was so much echymosis that I could not feel the bones at all Mr Desault advises when the effusion is so great to make a free incision down to the fractured cavity and discharge the fluid but this renders it a compound fracture which should not be done The natural progress of absorption will mostly remove it If however at the end of three or four months it be not removed a small puncture may be made into the cavity to discharge the fluid by this time the bones will have united and we shall avoid turning the fracture into a compound one as soon as this operation

is done the edges of the punctured wounds ~~shou~~ should be brought into contact by adhesive plaster so that the wounds may unite by the first intention. The Humerus is sometimes fractured transversely and sometimes longitudinally at the same time so as to separate them when the condyles are separated in this way or fractured, by taking one fragment in each hand and moving them backwards and forwards we easily perceive the crepitus. If only one be fractured we discover it in the same way. Besides this the parts are so thinly covered that the fracture may be readily felt. I have already s^d when the elbow joint is concerned in the injury it is right to keep the arm flexed. The forearm should be rendered incapable of motion and after the fragments are placed right a bandage should be wraped round the elbow beginning about the middle of the forearm and extending to as far up the arm

to fix the forearm two splints in the shape of < (lint) each forming right angles should be applied one over the internal condyle and the other over the outer one. Then two more bent splints are to be applied one anterior the other posterior these splints are to be secured by bandages The splints that extend along the forearm should reach to the wrist every motion of the forearm displaces the fragments and must be prevented by a bandage at the end of ten days we should take off the dressings and examine the limb, at the end of ten days more the dressing should again be taken off and the arm gently flexed after the 20th the dressings should be taken off every day and the arm gently flexed to prevent stiffening of the joint

Fractures of the Olecranon

These are mostly caused ~~for~~ by falls on the elbow and are always transverse when the Olecranon is fractured the patient is unable to extend the forearm because the triceps muscle which extends the arm is inserted into the detached ~~muscle~~ fragment the upper fragment is drawn a little upwards from its place by the contracting of the muscle and you may move it from side to side

Treatment The forearm must be extended and the process being placed in its situation must be secured by bandages begeinging at the wrist and winding to the shoulder when the bandages has got near to the elbow the Surgeon must feel if any portions of skin be got between the divided ends of the bone the bandages is then to be continued on. a splint should then be applied on the anterior side

of the arm to prevent flexion, after few days we may examine the state of the fracture and after the 20th day should remove the dressings daily and gently flex the arm in order to prevent stiffness of the joint which sometimes happens. The dressings should be continued about 15 days after till perfect union takes place

Fore-arm — The bones of the forearm are frequently fractured and the radius much oftener than the Ulna. The Ulna being very often ~~fractured alone~~ broken alone the radius is mostly fractured at the wrists when the Ulna is not broken with it. no difference here can be perceived in the length of the radius all the difference that can be perceived is an angular projection at the fore part of the wrist. The fracture is commonly so low as to be taken for a luxation. the surgeon will

put the arm in a sling and union will take place causing an ugly projection and the patient will be unable to rotate the arm as usual we may distinguish between them by the crepitus but beside the crepitus which can not always be felt we may know by the tubercle at the lower ends of the radius not being opposite to the styloids process of the Ulna as usual it sometimes happen however that both are broken at the same place — whenever this happens the patient cannot flex his arm the crepitus may be felt the arm bends at the place of fracture and there will be a lateral depression caused by the bones being brought near together —

Treatment To bring the divided surfaces in place an assistant should take hold of the elbow another another of the hands and make the necessary extension while the

extension is making the surgeon may replace the ends of the bone without any difficulty by taking holds of the arm and squeezing the flesh in between the bones so as to press them out - the interosseous ligament will prevent their being pressed too far out. This being done a bandage is to be applied beginning at the wrist and extending out to the elbow - two splints should then be applied which should be wider than the arm and of firm materials. Pasteboard without being wet answers very well the splints should be covered with soft linen and extend the ends of the fingers. The splint on the back part of the forearm should be applied with the upper end below the elbow or else the patient will punch himself when ever the arm is extended a roller is to be passed round the splints and the

forearm supported by a bandage taking care to keep the thumb uppermost or else the patient will not be able to rotate the hands as usual if it be suffered to heal in any other position at the end of about 4 weeks union will have taken place

The Metacarpal Bones are sometimes fractured. The extension can be made by pulling the ends of the fingers two splints are sufficient one on the forepart and one on the back part of the hand secured by a roller

The Phalanges are sometimes fractured they are easily replaced and secured by 4 small splints placed one at each side one on the back and the other on the fore part of the finger and a roller passed round them

Lecture

Of the Os Femoris

Fractures of the inner acer most frequently about the middle or rather below it ~~xx~~ sometimes above it sometimes at the trochanter and sometimes at the neck. If it is fractured at the middle ~~at~~ and the fracture is oblique it will be considerably shattered the fragments of one portion passing over the other in consequence of the contractions of the muscles. The patient cannot move his leg complains of pain the thy bends at that place and upon motion the Crepitus may be ~~felt in that place~~ discovered besides this the limb will be dislocated, the toes turning outwards and when one ends of the bone passes over the other it will occasion a lump with some tension at that place. The lower fragment is mostly under the uper one. The manner in which fractures of these bones

have been treated is very various, I shall at present show the method which is now most commonly used:—

The extension and Counterextension being made by assistants the bone is replaced by the Surgeon and short strips of muslin or linen placed under the thigh are brought over and decussate each other at the top then splints or thin pieces of cedar glued on leather are secured by thin pieces of tape tied round one at the upper and one at the lower end two bundles of straw are applied then one on the inside which is short and another on the outside and secured by tapes to prevent the foot from turning out a bandage is pinned to the inner bundle passed round the foot and pinned to the outer This is now the mode of treatment I believe in London It is however inconvenient: Mr Pott supposed that the shortness of the limb which frequently happened was owing to the Muscles being in a state of tension when the limb was

Recommended therefore the position ordering the pa to lie on the injured side and have the thigh drawn upwards towards the body and the knee bent and thereby gives the muscles in a state of relaxation but this will not be found to an swer for often the ends of the bones will be found to irritate the ends of the muscles causing them to take on contraction involuntarily and displace the bone, besides we cannot ascertain the length of the limb since measuring from the anterior spinous process of the illium in this position is very inaccurate again the posture is very uneasy and the patient cannot lie on his side so long so avoid this it has been contrived for the patient to lie on his back and have his thigh and leg to rest on a machine somewhat like the roof of a house so that the muscles might be relaxed but here every time the bed pan is passed under him the limb will be displaced to prevent this the sond of

Mr James Earle has contrived a double bed with pulleys to hoist the upper one which might have a hole of x rounds form cut through it to let the feces pass thro' it into the pan which is to be placed under the hole if to be filled with a cushion made to fit. But this is very complicated and seldom to be got it is therefore impracticable He has however made an improvement in the bandages having them short in the above described manner; so that the limb may be examined by just opening them at the top without disturbing it. All their modes are now found to be inconvenient for securing a fractured femur the body naturally descends upon the lower extremities when treated in this manner when the patient lies in bed. Mr Desault has greatly improved the dressings of fractured thighs by the invention of the long Splint I shall now shew you Desault's treatment. The bed should be made of line boards covered

with a matrass and the patient should have but one pillow under his head to prevent his slipping downwards. There are several parts of this apparatus 1st A tape string laid one just above the knee and one just below, one at the upper part of the thigh and one at the ankle 2nd a piece of muslin or linner to wrap the splints This should be wider having the acute angles at the outer and upper side 3rd ~~Band~~ bandages long enough to reach round the thigh laid with the edges in contact or so as to wrap over each other a little placed so as to reach from the perineum to the knee 4 a silk handkerchief. laid so as to come under the perineum and across the tubes to make the counterextension. The patient may then be laid upon them upon his back

5th a short splint of the thigh to be placed on the anterior part of it. 6th a small piece of leather spread with adhesive plaster and laid on the perineum the hair being previously removed

to prevent any excoriations from the counterex-
tending handkerchief —

7th another handkerchief to be passed round
under the heels and deniparted at the tops
of the foot brought below it and tied to make
the extension the same caution is here requisite
8th a short splint to go over the inside of the thigh
and a long one on the out side for making the
extension. The extension and counterextension
being made and the bones being placed in their
right situations the bandages are to be wrapped
the long splint (fig) is now rolled up in the lin-
nen for that purpose is to be applied below
up the extension. The excoriable layer end goes
under the ~~axl~~ axillas the holes next are to ~~rec~~
receive the Counterextending handkerchief, for
securing it the hole at the other end, the extend-
ing one often passing over the back which
we see in securing the splint edgewise which is
designed for keeping the foot straight and

having the extension ducitly under the foot in a straight line. The other short splints are to be rolled in the same manner to reach from the perineum to the sole of the foot notwithstanding the splints are applied in the linnen there will be some bare cavities where they are applied which are to be filled up with bags of chaff. These are to be laid between the splint and leg to fill the legs and keep it steady and easy. Chaff is preferred because it can be removed from one place to another the short splints are now to be laid on the anterior part of the thigh It should be of pasteboard and should fit the thigh the four pieces of tape are now tied to the splints In order to keep them firmer yet more a large bandage is passed over the long splint and round the body two or three times prevent any motion In this way extension and counterextension is completely kept. and the patient having many points to rest on

by laying on his back rests much easier than in any other position. He should now examine the length of the limb if the fractured one be two short increase the extension, and when the bandages get slack they should be tightened the fractured ends of the bone should not be drawn so as to come in contact at first the first. When there is violent contractions of the muscles it will cause great excoriation ~~by~~ but by keeping a moderate extension for a few days the muscles easily yields to the force and are overcome ——

Lectures — 130b.

The splint now generally in use ~~is not~~ for keeping up the extension is not that originally proposed by Desault in its original form but considerably altered. The one originally invented by him came only ~~up to the knee~~ to the upper part of the spine of the illium and extended a small way below the foot. The inconvenience resulting from the transverse position of the counterextending stay which almost alway presses the upper fragment outwards needed remedying. I therefore lengthened the splint so as to reach up to the axillae by this. The means for securing the counter extension must be brought to a straight line with the limb and by placing a pad to the part in contact with the axilla a portion of the counterextending force might be supported and thereby prevent the galling of the perinaeum this is particularly useful to women when urine is apt to get under

the dressings and excoriate the parts. when ex
coriations take place they may be washed with
a little brandy this I have found an excellent
remedy

Sometimes fractures happen at the neck of the
femur this may take place near the trochan
ter or near the round head of the bone or
the head itself may be fractured within the
ligament. The patient is often sensible of the
crack at the instant ~~when~~ it happens and cannot raise
himself from the grounds, walks nor stand
tho' Desault mentions two cases were the pa
tients could walk the fragments being so
interlocked the foot turns outwards seldom
or never inwards tho' it is said sometimes
they do The surgeon can readily extend the
limb If he is called in soon after the acci
dent but if a considerable time have elapsed
more force will be necessary and I have
sometimes been compelled to bleed ~~and~~
ad deliquium animi

The extremities being brought in contact the crepitus may be ~~felt~~ perceived There is another circumstance by which the extremities of a bone may be found place your finger on the great trochanter and then rotate the limb if the neck of the bone be be broken then the rotations of the bone will be on the axis of the thigh bone as the bone revolves on a pivot but if it be broken lower down the axis will be thrown further off and the trochanter will describe a much greater circle The Idea of a thigh bone revolving on a pivot will be strongest when the neck is fractured nearest to the trochanter If the limb be much inflamed we must delay setting it till the inflammation has abated the fracture of the neck I believe heals as soon as any other part of the bone unless when they occur within the capsular ligament I have seen one patient, and I have seen an instance where a fracture of this kind did not unite

in 8 Years

as we cannot always ascertain exactly fractures at the upper part of the thigh it is right in all cases of this kind to apply Desaults apparatus It would be right to inform the Patient of the danger and difficulty of unions when the fracture occurs within the capsular ligament or even in any part of the neck of the bone The dressings should be continued for 55 or 60 days Desault says "I have seen but very few fractures of the neck of the thigh bone indeed I may say but one. In this case the apparatus was taken off at the end of 6 weeks when the union was consequently very soft. The patient could not walk for near a Year, and still cripples this patient was not old. I think that only a kind of ligament formed between the rounded extremities. In every case therefore we should continue the dressings according to Desault. Contusions on the buttocks are sometimes taken for fractures of the neck of the bone they may commonly be distinguished by the length of the limb being the same

Sometimes the femor is fractured lower down than its middle occurring just above the condyles. The lower fragment slaping obligely upward and backwards when it is broken in this manner splints applied are sufficient. Desaults apparatus answers the purpose very completely a thick compress should be laid under the leg to raise the lower fragment. at times be side being fractured above the Condyls the Condyls are likewise separated. Fractures of the thigh bone at this place are easily ascertained the thigh bends at the place and the crepitus is readily felt the patient cannot bend his leg and when the condyls are separated the crepitus may be ~~later~~ discovered by grasping the condyls with each hand and rubbing them together. I never saw but one case of this kind and that was at the Hospital but but in this case the extremities of the upper fragments pierced thro' the integuments and made a compound fracture communicating

with the lower joint and the patient shortly died
Splints on each side are here likewise sufficient
I shall next shew Dr Hartshorns Method which
is ceartainly a very ingenious one and some
times answers better than Desault's his prin
cipale object is to make extension and com
fort extension can in a straight line with the
limb and thereby avoid any displacement of
the extension. Application of apparatus —

another advantage is the prevention
of the foot from turning inwards one par
ticular advantage derived from this mode
of dressing is when the fractured ends forms
an angle anteriorly which by this manner
of dressing can be kept down completely by a compress
You would think perhaps that a bandage
in the usual manner might do but it will
be found insufficient — The chief use of ban
dages next to the thigh is to prevent the ac
tions of the muscles & may give likewise
some lateral support.

Lecture 14th

Fractures of the Leg

These occur most frequently about the middle and when transverse are accompanied with or no displacement of fragments, but if the bones ~~bent~~ are broken obliquely the lower fragment passes behind the upper forming an angle anteriorly the end of the lower fragment being drawn back by the contractions of the muscles. The Tibias is more commonly fractured than the Fibula. They occur sometimes at the superior end near the head sometimes at the middle and sometimes just above the ankle. If one bone be broken only the other keeps in its proper situation if it be the Tibias by grasping the limb above and below and trying to bend the leg the fracture may be ascertained. If it be transverse no displacement will take place I once saw a case of this kind when the patient

after having his limb dressed and being in bed for three days felt so easy as to suppose I had been mistaken and that his limb had not been broken the bandages were therefore taken off and the patient began to walk about the room the family likewise thought I had been mistaken being confident of the fracture I requested him to let me see him walk he did so but the bone presently bent under him and he fell upon the floor, and had nearly converted it into a compound fracture In all cases by grasping the limb above and below the fracture and moving the limb the cripitas may be felt when the fibulae is fractured the cripitas may be felt by moving the foot

Treatment: The leg is to be laid on a pillow after the extension and counterextension are made and the fractured extremities are brought in contact a roller may be applied upon the ankle to the knee but as this

cannot

easily be opened to examine the knee I prefer the strips during the application this, the extension & counter-extension should be kept up by assistants two splints are then to be applied one on the inside and the other on the outside of the leg and secured by pieces of tape the splints should be of pasteboard. To support the leg and keep it firm two narrow boards are to be applied one on the inside and another on the outside of the pillow on which the leg rests and to be secured by tapes if it be left in this manner the foot will fall outwards, and downwards a bandage pinned to one side passed round the foot and pinned to the other will prevent this. A cradle or in want of this two hoops of a flour cask with about one thirds cut out of each hoop and across side in the middle is to be placed over the ~~middle~~ limb to support the bedclothes

When the Tibia and Fibulae are fractured transversely this methods answers very well but when but when obliquely and angle will be formed

anteriorly and the leg will be shorter on account of the contractions of the muscles In these cases the extension and counter-extension invented by Desault has been greatly improved by Dr Hutchinson whose methods I now shew you. The counter-extension is made by two pieces of tape on the inside and one on the outside of the leg then a roller passed round them below the knee so as to secure them in that situation this should not be done tight or else the superficial veins will be apt to swell in consequence of the pressure of the pressure on the superficial veins A sick handkerchief folded in half should be passed under the heel brought on the top of the foot decussated, and carried below to make the extension bandages are to be placed under the limb enough to reach from the ankle to the knee. The extension and counter extension is made by the assistants while the surgeon wraps the bandages two splints with holes in this manner. Fig 1 are next to be placed on

each side of the leg these must be long enough to reach from above the knee below the foot, the tapes on each side of the leg is to be passed through two small holes at the upper end of the splint and tied while a bar is passed thro a large one beneath the foot and fastened with pins. The extending handkerchief is tied to the bar by which means the extension is completed. Left with two bags of chaff are to be placed between the leg and the splints one on each side and the leg supported by a pillow. The greatest inconvenience resulting from this mode of treatment is the swelling of the leg occasioned by the bandage round the knee the foot too often swells in consequence of the lymphatics being pressed upon as well as the veins. This mode of treatment will answer when any considerable swelling or inflamation exists as it will tend to increase it. This is a good method for compound fractures as it

can be easily opened to examine the limb and to apply the dressings to the wound and the extension and counter extension can be prevented when the fracture is oblique In one instance of this kind the limb swelled so much that I was obliged to omit it and use Desault's apparatus, Sometimes the tibia is fractured nearly at its lower point In fractures happening at this place seldom any displacement occurs but the joint is very apt to swell in fractures happening at this part seldom any displacement occurs but the joint is very apt to swell and become very much enlarged and is often difficult of cure I have seen a case of this kind when the all the anti phlogistic remedies had been tried as bleeding, purging, cupping, and the application of leeches &c but with no benefit which was cured simply with with extension and counter-extension and the antiphlogistic regimen. The patient should be kept in bed a long time as union does not-

take place soon. When they happen at the knee the limb should not be moved for 4 weeks and the dressings should be continued for 6 weeks and then moved but little and very carefully when it is fractured at the ankle the same treatment is necessary The Fibulas is mostly fractured at the lower part near the ankle but if broken by a blow it may occur where the violence is applied. But the fibulas is sometimes broken by an abduction of the foot and the foot likewise luxated. The reductions of it may be easily accomplished by grasping the foot and making extension for a fractured fibulas the bandages should not be tight for the same reason as in the forearm Two splints are to be applied at the sides of the leg to steady the foot as the cure cannot be accomplished if the foot be allowed to move because the lower fragment will follow ~~the~~ the motions of the foot, in about twenty five days ~~will~~ union will be affected——

Of the patella Fractures of the patellas are commonly transverse. Sometimes they are oblique. I have saw one longitudinal. The transverse are generally occasioned by a violent extension of the leg and the oblique and longitudinal by external violence of falling on the knee. When a fracture of the patellas takes place the knee becomes lame and the upper fragment is drawn upwards by the contraction of the muscles the lower fragment being fixed cannot move the patient cannot walk forwards because he cannot extend his leg but can go backwards and draw it after him when the leg is extended upon the thigh the upper fragment will sometimes come in contact with the Condyles and the Crepitus be felt in longitudinal fractures the vacancy can be easily felt the ligaments are so thin and a crepitus may be felt on rubbing the parts ~~together~~ on each other

Treatment In transverse fractures bring the upper fragment down as near as you can The Patient-

is to be laid in bed and the trunk moved by means of pulleys so as to relax the extensor muscles of the leg the leg too is to be elevated in the same way when the patients are placed in this position and the fragments are brought close apply a bandage from the foot to the knee the fragments being thus brought together a compress is to be applied above the upper fragment and a similar one below the lower one. These compresses are to be secured by a roller round the knee nearly in the figure of 8 as follows begining above the patella pass over under the poples over the tibia just below the patellas under the poples again then over the knee joint above the patellas and so on pursuing the same course again this is the best mode of dressing. The compresses being secured pass the bandages over the patella so as to cover it to prevent the soft parts from swelling In this manner the ends of the bones can be kept in contact The bandages wrapped from the foot prevent the foot from swelling but counteracts

the disposition of the muscels to contract To—
prevent flexion of the leg a splint reaching from
the ischium to the heels is to be applied on the
anterior part of the leg It should be covered
with flannels and secured by a roller if the
splint reach below the foot the pressure on the heel
may cause relaxations the leg is to be kept elevated
sometime some surgeons have been afraid
to bring the edges of the patella in contact for
fear the bony matter would be effused into
the cavity joint and cause anchylosis If the bandage
on the upper fragment be too tight anchylosis
will sometimes actually take place pressure
causes absorption of the cartilages and
union takes place between the bones rendering
the joint stiff the bandages should never be
applied tight if much inflammation exist union
will be a good while in taking place (in about 8
weeks) when the dressing become loose they are
to be removed by the surgeon. In longitudinal
fractures a compress is to be applied at each
side and the flexion secured

Sometimes the upper fragment when no attension is paide is drawn up 3 or 4 inches and a ligament is formed uniting the ends of the bones to assist the motions of the leg. Indeede we can seldome bring the fractured ends of the bones together so close as to form a bony union this ligament altho' it has been supposed an imperfection of the Animal economy is a surprising instance of the perfection thereof for if a bony matter had been thrown out and completely ossified the knee would have been entirely stiff, whereas by this ligament being formed the patient may come to have the perfect use of this limb by gently exercising it every day the patient should sit on a table and swing his leg as much as possible altho' he will ~~not~~ acquire strength but slowly yet by perseverance the muscles will accommodate themselves to the extra length of the tendon and the ~~patient~~ patient will be able to walk as well as every

Lecture 15th —

Dislocations when any bone forming a joint is forced out of its natural situation it is said to be luxated It occasions the patient considerable pain and causes a very considerable alteration in the shape of the limb. In general if the surgeon be called in soon after the accident it can be easily reduced the greatest difficulty we have to contend with is the contraction of the muscles the ruptured capsular ligament & does not make much resistance except under certain circumstances. The patient should be restricted to low diet a warm bath and mechanical force and when there is a difficulty of reduction the patient should be bled to weaken the contractions of the muscles when they will be overcome with more ease In different cases I have found when the usual methods failed that the best method is to bleed ad deliquium Animi this completely destroys all muscular force and experience has proved it to be the best method

this mode of treatment was first practised in this country by myself when the patients refuse this I have tried the nauseating effects of an emetic just before vomiting, injections of an infusion of tobacco or tobacco smoke has produced the effect when other things have failed Boyer says that intoxication produces the same effects and I would suppose might answer very well the muscular contractions continues to resist the reduction for about 3 weeks after which the muscles become accommodated to their situation the bone begins to form adhesion which with the contraction of the capsule of the joint causes the difficulty of displacement so that it is very necessary to bleed and ad-deliquium-animi in cases where the luxation has existed more than a month when we apply force for the reduction of a dislocation ~~and~~ we should be careful only to apply it to the dislocated joint the limb should be placed in a relaxed state. I now speak of particular luxations and first of the lower jaw. —

Luxation of the Lower jaw. When these occur they take place forwards and upwards so that the condyls rest on the tubercles of the temporal bone sometimes both condyls are brought forward and sometimes only one when only one is displaced the jaw is turned only to one side when both are luxated the motion of hands made often in spite of the efforts of the patient to the contrary and the same effect in patient's mind notwithstanding takes place when only one condyl is displaced. If you apply your finger at the place of the articulation the cavity may be felt. Luxation of the jaw occur from yawning or from opening the mouth too wide sometimes causing a good deal of pain some years since a woman in the market-building into a great passion and opening her mouth very wide the better to vociferate luxated both condyls and to her great mortification could not close her mouth again and was brought two or three squares in this predicament to me to have them replaced. They were easily reduced

Treatment In proceeding to reduce the lower jaw we must take the precaution to wrap up our thumbs very well to prevent their being injured by the convulsive action of the muscles they must be placed as far back as the molar teeth as possible the fingers are to be placed under the chin then press the jaw onde backwards at the same time squeezing the fingers upwards if the fingers dont press the jaw down the reductions will not be easy if at all accomplished I have seen great force applied directly backwards without any effect. Some have advised to give a knock under the chin this may sometimes succeed but is apt to break off the necks of the condyles no bandage is necessary after the reduction

Luxation of the Clavicle This may take place at the sternum or at the acromion process I have never seen it at the sternum tho' I have no doubt it may readily take place on account of the superficial articulation If a considerable force be applied

-so as to push the shoulder forwards and outwards when it happens the patient is unable to raise his arm. Luxations at the scapular ends I have seen they may be assumed by the patient being thrown on his shoulder from an eminence so as to jerk it downwards In both instances the treatment is the same for fractures (Clavicle When the scapular ends is dislocated we must contence the ends for some time or else the shoulder will sink down lower than nat rule and form a tumour on the top of the shoulder

Luxations of the O. Humeri This takes place at the shoulder joint and occurs oftener than any other bone owing to its great latitude of motions in every situations allowed by its glenoide cavity It is commonly downwards and inwards towards the axilla and mostly occasioned by a fall on the shoulder than Shoulder seen it luxated forwards between the pectoral muscles and Clavicle but mostly inside

of the coracoid process. It is said to have been luxated backwards this I have never seen when it is luxated inwards and downwards a depression can be felt above the humerus beneath it and the acromion process. If you put your finger in the axillae the round head of the humerus may be felt the patient cannot put his elbow to his side he cannot rotate the arm nor raise the fore arm to his head which is most commonly done in some degree. He commonly has an inclination to rest his arm on something to support it I have always shown how to distinguish between luxations of the humerus and fractures. which you would do well to remember ——— Treatment If the surgeon is called soon there is but little difficulty in replacing the bone because the muscles do not begin to exert themselves immediately. I have accomplished a reduction by placing one hand up on the acromion process to make the counter

extension. To apply a greater force it has been advised to fix a ~~tof~~ couple of towels just above the elbow by means of a roller then turn the ends of them down. But Mr Hays method I think ~~I the~~ is preferable when the arm is drawn out by an assistant and counter extension made by another place your hands under the axilla and press upwards at the same time and gently press the elbow in towards the side after you have tried this methods without effect bleed ad deliquium animi. If the patient be strong this cannot do any hurt and if weak there will be no necessity for it. This completely removes muscular action and the limb can be reduced with ease. About ten years since a man was admitted into the Pensylvania Hospital with a dislocated humerus the accident had happened 3 or 4 weeks before and the parts were so much swelled that he had to remain here ten days before we

could ascertain whether it was luxated or not after all usual means with no effect, I told him till he fell on the floor in a fainting fit when the bone was reduced with great ease I have since repeated it with the same good effect after a limb has been luxated 3 or 4 weeks the muscles become accommodated to their situation and begin to form adhesions. The best way to accomplish reductions after adhesions have taken place is by means of a compound tackle take two round towels and secure them at the middle part, near the elbow, by means of a roller turn the upper half's down to the lower and thro' the ends of them pass the rope of the tackle to make the extension the other rope to secure the tackle is to fasten to a firm place to make the extension a long strap about an inch wide stuffed with hair or cotton applied against the ends of the accessions bones ends the ends brot round thro' the body in a contrary direction are

made fast in some firm place to prevent the strap slipping off and excoriating the shoulder a strip of a roller may be passed round it by which it may be held in its place. To secure the thorax have a wide strap or belt and pass it round the body securing it by a buckle or otherwise to this have a rope which may be held by an assistant to keep the body in its place. This fixes draw the rope to make to ~~mak~~ make the extension and be careful that the counter extension be made against the acromion process or else the arm may be torn from the chest. It is therefore of great service to make the counter extension on the acromion process. In making the extension the arm should be rotated to rupture the adhesions which have formed. The surgeon may have a towel under his arm and over his shoulder to draw the arm up and he may put his arm in the axillae and push the patients elbow downwards with the other hand rising the humerus

as a lever. The bone has been lodged in the axilla for 6 and 9 weeks and has been replaced and indeed for a much longer time for it is possible to replace a bone surrounded by a fine capsular from a natural to an unnatural situation and it is possible to bring it from an unnatural to a natural one. But when the bone cannot be reduced we must not despair altogether as a great many useful operations may be performed. I knew a carpenter maker whose arm was dislocated and yet he was able to follow his trade and the only motion he was able to perform was ~~[illegible]~~ drawing his arm directly upwards I shall not pretend to describe all the machines that have been invented for reducing luxations but only a few of them. It has been supposed that a staple fixed in the floor over head and the patient suspended from it by his arm would be productive of good effects but it would endanger tearing the arm from the chest as no counterextension could be made

against the scapular. another method is to grasp the arm for the purpose of making extension the patient being laid down then heave the foot in the axilla to make the counter extension and when you make this extension pop your arm towards the side and your foot will thrust the head of the bone into its place I saw Mr Hunter do this very successfully. some advise hanging with the arm over a ladder but none of these are good

Lecture 16th

Luxations of the fore arm &c.

The forearm is located forwards and backwards forming a prominence behind in arm cui is kept flexed the sometimes it is located laterally the coverings of the part are so thin that the surgeon can easily ascertain the nature of the case. the patient cannot flex or extend the arm the coronoid process of the ulna occupies the cavity naturally filled by the Olecranon

and is what prevents the reduction. Treatment In order to reduce it an assistant should take hold just above the elbow and an other below at the wrist to make the necessary extension. The surgeon is to take hold just below the elbow and pull at the same time directly backwards to draw the coracoide process from of the humerus when the arm is forcibly enough extended by the assistant bends it towards the body which will be in most instances sufficient to complete the reduction a bandage may then be passed round to secure it

Luxations of the Wrist.

The bones may forwards or backwards It can be readily reduced by making the necessary extension pressing the bones at the same time into their place

Luxations of the Fingers

also occur forwards and backwards extension & bending will in common reduce them ——

When the thumb is luxatéd at the second pha lanx it is the most difficult of reduction of any bone in the body extension has been applied so as to tear off the joint of the phalanx without effecting the reduction of the bone

Luxations of the Os Femoris

It was formerly thot not to occur often on account of the amazing strength of the capsular ligament which it was computed was sufficient to bear 1000 lb weight from this concluded luxation would not often happen. I have seen more cases of luxation of the hip bone or of the thigh at the hip bone than ever I saw of fractures of the neck of ~~the~~ it. I believe about nine luxations and not more than three fractures. It is generally luxated so that the bone passes upwards and backwards lodging in the dorsum ilii and next to this downwards and forwards into the foramin Ovali and may be luxated immediately backwards—

when it is luxated backwards and upwards the the limb is commonly about 1½ inches shorter than usual if a bruise has taken place about the pelvis it may influence the length of the limb by causing the pelvis to be drawn to one side. In order to ascertain if the pelvis be straight has a string or strip from one anterior superior spinous process to the other if it cut the body at right angles the pelvis is straight then measure from the anterior process to the knee or the purpose of ascertaining the length of the limb It is necessary to ascertain if the pelvis be straight before we can know of the existence of the luxation. If the point be bruised the injured limb will be the longest when the luxation is upwards and backwards the toes turning inwards and turning them outwards causes great pain the patient cannot move the limb This when all other symptoms are wanting is enough to ascertain the existence of a luxation upwards & backwards. It is nowise difficult in ordinary cases

to distinguish between luxation and fractures of the head thigh bone of this I spoke when treating of fractures of the thigh bone when bone is luxated no crepitus is to be felt and when the neck of the bone is felt the foot always turns outwards and is easily turned inwards but if it be luxated upwards and backwards the foot cannot be turned outwards at all without causing very great pains when it is luxated downwards and forwards it is lengthened inwards about an ~~foot~~ inch and the foot is turned outwards and turning it inwards caused great pain the distance between the trochanter major the anterior superior superior spinous process is greater when the head of the bone is luxated forwards and upwards on the os pubis it is a little shorter this is a very rare occurrence only one case of it is mentioned by Desault in which case the foot was turned outwards The same kind of treatment is required nearly in all cases that is extension and counter extension as the bone of the acetabulum is large

and apparatus to dislodge the head of the bone and pull it straight from the body making the extension and counterextension on a right line with the body. On these general principles luxations of the thighs are to be treated In the luxations of the heads of the thigh bone it is necessary to use a considerable degree of force for its reduction and the best methods is by compound pullies when they can be had but can readily dispensed by the assistance of men and one advantages over the pulley is that they can desist instantly when required but in obstinate cases when much is used pullies are commonly had recourse to

Treatment When it is luxated upwards and backwards the patient is laid upon his sound side and the limb bended at the Hip and knee to relax the muscles ~~for the~~ a strap for the purpose of making Counterextension is to be passed under the perineum between the scrotum

and injured thigh having some soft substance passed between it and the perinaeum and fastened to a fixed point near two strong round towels on each side of the thigh just above the knee to be secured by a roller to make extension - When this cannot be fixed above in fat persons it may be put just below the knee but it is best to secure the extending power to the inner bone. A fully fixed to the towels can make extension with great force. during the extension the surgeon must rotate the bone to detach the ~~the~~ ilibones if this be found insufficient bleed ad deliquium Animi When the head is lurked into the foramen ovale or forwards on the os pubis make the usual extensions and counter extensions at right angles with the thigh bone which is absolutely necessary To effect this patient lying on a table pass a strong towel round between the thighs close to the perinaeum an assistant is then to get on the table ~~the~~ and take the towel over his shoulder

and pulls upwards to make the extension while his knee is placed on the crista of the illium to make the counter extension meanwhile the surgeon is to rotate the limb If this is found insufficient for drawing the head of the bone out of its situation fix a pulley to the tweed and pass a long bandage round the crista and fasten to a staple for making the counter extension. This method succeeded last winter when the head of the bone is on the pubis the surgeon should bend the leg at the knee and rotate it by placing one hand on the knee and grasping with the other below it whilst the extension is making. Dessault thought the constriction of the capsular ligament prevented reduction but I believe almost the only cause of resistance in the reduction is the contraction of muscles for the same orifice which suffered the bone to escape would be large enough ~~for~~ to let it ~~to~~ return — —

If the bone is not reduced it will form a new socket for itself. A proof that the head of the femur will form a new socket out of the acetabulum is instanced in a girl who fell and hurt her hip very much so that she kept her bed for several weeks when the swelling which had supervened subsided her hip was found to be luxated sometime after she began to go about again she fell and hurt the other hip when she got over this she found that her legs contrary to what they had been were now nearly of one length and after she had acquired more strength she was able to walk upon crutches and gained strength in her hips every day. she was shortly taken sick and died. The hips were dissected and found both luxated new acetabula being formed on both sides which no doubt would have done very well had she lived

I should next speak of luxation of the knee joint
These occur but very rarely I never saw but
two cases and in both these the Tibia was
received on the external Condyloid it is
easily reduced tho' not so easily kept in its
situation when done the leg is much distorted
Because long splint answers very well for
keeping the bones in their situations after they
are reduced the patient should keep the
limb in a state of perfect rest for 8 or 10 weeks
untill the ruptured ligaments are perfect
ly healed. The patient must be kept in bed
I once saw a luxation of the ankle tho'
they rarely occur a Lady with high heels
shoes once was ~~[illegible]~~ coming down stairs, and
stepped too far so that the heels of the shoe
only rested on the step the weight of her
body pressing the heels back pressed the Tibia
forwards off the astragalus and to the

instep in consequence of which the toes were kept extended. The malcoles was likewise broken I was not called till the swelling and inflammation had taken place and could not ascertain exactly what was the matter she was bled and at the end of about 3 days when the swelling had subsided I was able to ascertain the nature the nature of it. It was reduced by an assistant holding down the tibia whilst I caught holds of the heel and toes and pulled the foot forwards. A splint was applied for the fractured malcoles. For the treatment of sprains I refer you to Boyer the joint should be immersed in solds water for sometime or water poured over it after which cloths wet with vinegar should be applied and continued for several days for if the patient walks he is sure to bring on inflammation

which upon resting will subside and return again upon motion if used too soon and if the patient continues to use it suppuration and hectic may be the consequence which in one case of a lady actually succeeded curves of the ends of the bone takes place and amputation is necessary for the recovery of the Patient

Lecture 17th

Injuries of the Head

Injuries of the head may be divided into external as they affect the scalp and integuments and internal as they effect the Brain and its membranes. They are of several kinds 1st Contusions 2nd punctures 3rd Inflammation of the brain and its membranes and 4th concussion. I shall begin first with the scalp. are various and first of Contusions when contusions of the Scalp occur in which there is a rupture of the vessels they pour out their fluids forming a tumour and swelling which has a pappy feel around this tumour their are hard edges and imparts a sensation to the fingers of broken bone which often misleads the inexperienced

who are not aware of it inducing them to make incisions thro the scalp when to their surprise they finds the bone bared and this produces a disagreeable suppurating sore and perhaps exfoliation of the bone The best treatment is the application of rags wet with vinegar to the injured part in a few days the extravasated blood will be absorbed the scalp is sometimes bruised and low loose from the bone for some extent and under such circumstances it has been advised to cut off the loose portions but this should never be done the parts should be well cleansed of dirt and the flap placed in its natural situation and kept so by adhesive plaster or strips It has been objected to that abscesses would

form beneath and the loose part be removed at last. If abscesses do form they must be opened as other parts and it is better to run the risk of a few small abscesses than to produce so great a deformity and perhaps cause exfoliation of the bone — In punctured wounds of the scalp the patient is often affected with great pain especially if the aponeurosis be wounded. If the inflammation extends to the pericranium it becomes necessary to dilate the wound the patient becomes feverish I have seen inflammation of it occur in every kind of wounds except the incised wounds. It has been supposed that it occasioned inflammation of the brain and therefore trepanning has been advised but I believe it does not occur when the injury is on the outside for it is

hardly probable that the two sides of a cavity will become so much inflamed at the same time For instance in violent Inflammation of the villous coat of the stomach the peritoneal coat is harly ever inflamed and vice versa ——————————

In peritoneal inflammations the internals coats are seldom affected. Besides these affections there is another affection of injures of the scalp which is a severe pain in the part stricken It takes place from the time of the accident. I have seen contusions of the scalp which excites great pain in the part and continues for a long time. The first one I ever saw was that of a lady who had received an injury upon the parietal bone from the facing of the sash which gave her great pain The inflammation subsides in a few days but the pain continues.

She had used evaporants without any benefits upon first examining the case I thought the bone was fractured but upon further examination it was found to be only bruised. I proposed an incision which was made thro' the scalp, the pain instantly ceased and never returned

An other Instance of a young man who had received an injury of the scalp upon the parietal bones upon one side and at the same time received a blow upon the other great pain followed it which still increased and by the second day the pain was become so great that his friends had to hold his head to prevent the ordinary sounds of the house made by walking across the floor from exciting convulsions evaporating medicines were used but with no effect. an incision was made thro' the scalp in the contused wounds by which he was much relieved but the pain returned in half an

bone on the other side. The bruise on the other side was also laid open and the pain cured and never returned again some cases of this kind have resisted every treatment and subsided only upon retiring into the Country and remaining there for a considerable time —

Of the Brain & its Membranes & first of Compressions when injuries of the head occasions compressions of the brain. Coma, sickness of stomach, vomiting involuntary discharge of urine and fæces take place the causes which produce this are of two kinds viz. 1st Indentations of the Brain and Skull & 2nd the principal causes of compressions are effusions of the blood or other fluids collected inside of the cranium, either between the membranes and skull, in the substance of the brain itself or in the ventricles, and this may happen without a fracture of the cranium or with it.

Fractures of the Cranium occur sometimes without these symptoms even when the bone is indented I have seen slight depressions of the Cranium without any of the usual symptoms of compressed Brain an instance of this kind was in a fracture of the forhead so that the little finger might lay in the Indentations and yet no symptoms of injured Brain existed but in all the cases of this kind which I have seen the injury was received just over the frontal sinus then no symptoms of compressed Brain occur the scalp should not be divided but when symptoms of compression occur make an incision thro the scalp so that you can examine the bone If the incision be not already sufficient and relieve the compression with the Trephine It has been customary to separate a portion of scalp I myself once cut off about 1/4 of it but this is alway cruel since it is of no use a simple incission or crucial one is always sufficient to examine the state of the

-bone if a fracture be found to exist it is safest to make a ~~incision~~ perforation thro' the bone to relieve the Dura-Matter. In Compressions of the brain resulting from effusions from the vessels the symptoms do not always occur immediately because the effusion does not always accumulate soon enough to produce it immediately. I was once called to visit a boy who had received a hurt on the forhead from a stone thrown across the street. The bone was fractured and a little depressed the pain was not so great at first but that he went home and gave a history of the accident. but before I arrived he was severly attacked and fell from his chair supposed to be dead. His pulse was and his extremities were cold. The operation of trepaning was performed blood exuded from beneath the skull which had accasioned the compression and he was immediately relieved. 3rd The next injuries I shall notice are such as produce inflammations of the Brain and its

membranes. The inflammation does not come on for sometimes after the accident Symptoms The patient cannot sleep constant watchfulness pulse hard and tense the face becomes turgid and flushed a sense of tightness as if a cord was tied round the brain. Thirst suffusion of the eyes delirium nausea vomiting

If these symptoms continue for some days without any abatement or rather increase instead of decrease and if they are occasioned by contusions of the scalp a free incision should be made down to the bone to examine the state of the parts If the inflammation within the skull have proceeded on to suppuration the pericranium will be found spontaneously separating from the skull and discharge very commonly a portion of thin ichorous matter the bone will have an unhealthy appearance generally of a whitish milky color but sometimes of a purple color or tinge under

such circumstances the tepheme should be applied immediately. The Inflammation may arise from simple Contusions of the scalp or from Concussion of the Brain in Contusions of the scalp apply a bread and milk poultice, and if an abscess form underneath heal it as you would in any other part. In all cases low diet should be strictly adhered to to prevent inflammation of the Brain or any of its membranes, purgies should be made (Opium, Rem Sub. blisters should be applied all over the head and kept running —

In inflammation of the Dura Matter when we have reason to believe there is a formation of Matter on its surface between it and the skull an opening should be made thro' the bone for the discharge of it sometimes both the Dura Mater and Pia Mater are injured when it is the latter a perforation of the skull is of no use as the matter collects beneath the

Dura Mater cannot be evacuated when there is reason to believe that inflammation of the Dura Mater and pia Mater have taken place from contused wounds the patient should be trepanned at the place of injury which by raising the tension of the inflamed membranes may prevent suppuration and a train of disagreeable symptoms When the degree of violence has been sufficient to fracture the skull we sometimes find the edges of the fracture are close a question has arisen whether the patient should be trepanned or not Mr Pott who took great pains to inform himself of the nature of the injuries of the head is of a opinion that it had better be done immediately and it is certainly safest, because there is a great risk of inflammation & suppuration taking place. The reason why it should be done is that the fracture is compound or else it would not be ascertained that the edges

of the fracture were in contact this makes it necessary, But I have seen when the inflammation was not great suppuration of the Dura Mater avoided by the antiphlogistic regimen The simple fractures of the cranium when the brain is not compressed the trephine should not be applied immediately

CONCUSSION This sometimes produces the symptoms of compression and in other cases not. It may arise from falling from a height on a hard floor from falls or from violence applied to the head in wounds of the scalp when the patient becomes immediately senseless or delirious or beginning a sentence and breaking in the middle and deeply it is supposed that the brain has been shaken I doubt however whether some of the vessels of the cranium are not ruptured upon some occasions I have on examination, when the Brain was supposed to have been concussed, found the vessels ruptured and in others not so

In these cases no benefit is derived from trepanning. General remedies should be used as the antiphlogistic plan. Stimulating remedies should be avoided Ven. Sect, low diet, blisters, and if these fails Mercury influencent to excite a salivation as a general remedy I believe it would be right in Contusions of the ~~Brain~~ head in every instance to pour cold water over the head for some time by which means the effusion from the vessels of the head will be prevented in a great degree. I would recommend for your perusal Pott on the injuries of the head I have now only to shew the methods of operating with a Trephine In the first place remove the hair by which means we will be able to examine the injury of the scalp for which purpose a scalpel the handle of which is capped with iron in order to cleanse the bone will be found fittest In laying bare the skull take notice whether it be fractured or whether a groove made

By some vessels appear If it be the latter the edges will be smooth and if the former they will be sharp. If the bone be depressed it must be elevated to do this it is necessary to move a portion of the sound part to the centre point of the trephine should be placed in a sound part or else it will & tends to depress it more without the perforation is making great caution should be had to move as you still perforate deeper so that it does not penetrate the Dura Mater It is likewise to be carefully observed while operating over the lateral veins when you suppose you are nearly thro' the bone the circular path of the trephine should be well cleared and examine if in any place it is nearly thro'. For this purpose a common tooth pick answers very well you may likewise have recourse to your elevator (this should be often towards the last and try if you can raise the

underneath piece if you finds it nearly thro on one side leave the instrument on the other It is advisable to force the piece out with the elevator before it be quite cut through as there will then be less danger of injury to the Dura Mater and any spicula of remaining bone may be broken may be broken off with the elevator a saw of this shape (Fig) may be used after the Trephine when long depressions of bone require it because to use the trephine adjoining would remove the sound part of the skull too much when symptoms of extravasation within the Cranium occur from external injury to the head a perforation should be made thro the skulls to let out the effusion when blood is collected between the Dura Mater and the Skull a hole may be made in this manner for it to flap out sometimes this effusion is but small, at other times it is of great extent so that the Dura Mater lying close to the perforations prevents its escape. a spatulas introduced

between the Dura Mater and skull unless suffer the blood to flow out, sometimes an effusion is collected between the Dura Mater and the Brain and upon the removal of the bone instead of a flat surface a convex one is presented sometimes rising up so as to files the opening of the bone but no motion of the Brain will be perceived These are not symptoms between the lobes of the of the brain, because if it was an extravasation between the lobes of the brain the motion of the brain would be perceived I have never seen the dura Mater punctured in any case in which the patient got well therefore when it can be avoided it should not be done I have cured an effusion in the Brain when by pursuing the antiphlogistic regimen and bleeding as often as four or five times per Diem for 5 days the patient was cured which I believe would not have happened had the Dura Mater been punctured. There was a fungus portion

from the wounds suppuration takes place at its root and the patient dies after the operation of trepanning is gone thro bring the edges of the scalp into contact and then apply a simple poultice of bread and milk which is the most easy applications. Lint is not a good dressing nor should any greasy dressings be applied as it would prevent the discharge flowing out. The poultice should be continued until the granulations apear and then dress it with simple ceratu. The applications of the Septics only in this case relieves the compression this done we must guard against inflammation by bleeding, cathartics, low diet, the antiphlogistic plan should be persevered in while any symptoms of Coma continue. And in depressions of the ~~Cranium~~ bone the edges of the divided scalp when the Brain is completely by elevation may be drawn together to unite by the first intention as it would take a much longer time to heal it if it be poulticed and suffered to granulate

Lecture 18th.

Diseases of the Eyes.

First then of Inflammation. This may take in the eye lids in whole or in part in the Tunica conjunctiva or in the Globe of the eye either in the anterior or posterior Chamber Inflammations of the eyelids sometimes cause an extravasation of serum into their cellular Membrane swelling the part very much so that the patient cannot open his eyelids the skin becomes of a scarlet color This happens frequently in the night the Patient supposing it to arise from the bite of an insect. It is however not easy to ascertain what is the cause unless when it arises from the chemical violence. Treatment In general if there be much Inflammation blood letting should be used which with the exhibition of a mild purge and low diet will mostly

answer it. If this be not sufficient the application of camphor and brandy may be tried. The best way of using these remedies is to dip wraps in them wring them out and lay them over the eyes. The discharge of fluids in most cases of inflammation of the eyelids is but small sometimes the edges of the eyelids become excoriated and discharge a viscid purulent fluids agglutinating the eyelids so that the patient has to wash them in the morning before he can get them open. The general opinion is that it is owing to ulcerations of the mouth of the ducts of the Glandulae Meibomi I however believe it to be owing to ulcerations seated at the roots of the hairs resembling in this respect the tinea capitis a proof of this opinion being correct is that they have been drawn out and the patient got well ——

Treatment. A wash of solution of has been advised taking care to wash it off afterwards so that none of it may get into the eyes. Spermaciti has been advised with advantage. The most general remedy is a solution of Saccharum Saturni. or Unguentum Citrine. I have however found that the Unguentum applied between the edges of the eyelids is the best remedy when this fails drawing out the hairs has proved effectual A Girl of about ten years old was cured by this ointment in about two weeks she had been afflicted with inflammation and ulceration of the eyelids for 9 years

Of The Tunica Conjunctiva When this is inflamed it becomes red owing to the increased size, and action of the vessels which were before relaxed but now admits red Blood the eye waters ~~ex~~ exceedingly the patient cannot bear the actions of the light the pain is ~~x~~ a

burning kind causing a sensation as of extrane
ous matter in some instances the pain is not
confined to the eye but effects the forhead
sometimes the inflammation is in a pimple
or specks this may be situated either in the
Tunicas or the Adnatas or the Corneas
The only difference between these is in seeing as
the latter intercepts the light.
Inflammations of the Conjunctivas often spread
over the whole Corneas throwing out the coagulable
lymphs and if not soon cured leave a film
behind obstructing the sight of the Patient and
the pimple just mention if not soon cured leave
an opaque speck behind it. The inflamma
tions of the Corneas of the eye causes are ex
travasations of the coagulable lymph which
occasions the disease called Unguis. injuries
done to the eye which occasion inflammation are
1st Mechanical 2nd by wounds as by sand getting
into the eye Fricharis 3rd. acrid substances ap
plied to the eyes these often occasion blindness
as, lime, smoke, acids, &c 4th too strong light.

5th too much exercise of the eyes in viewing small objects 6th Cold. 7th Intoxication, venereal Diseases &c. Inflammations often occurs without one being able to assign any reason for it. Inflamation of the eyes is sometimes produced by the matter of gonorrhea being applied to them This is a rare occurrence but when it proceeds from this cause it is mostly very bad ———

Inflammations of the Globe of the Eyes —

This may occur before the Chrystalin lens or in the posterior Chamber of the eye behind the lens It is attended with great sensibility when it affects the anterior Chamber only there is not so much pain when it occurs in the posterior Chamber it occasions violent pain the fever runs very high and in general if it is not soon removed the sight is lost. The first case I ever saw of the kind the patient died

Treatment first remove all mechanical violen

and avoid the remote causes If it be produced by some extraneous matter getting into the eye as a speck of sand lodging between the lid and the Globe of the eye it must be wiped off a probe with a piece of soft rag wrapped round it and passed between the lids and the ball will mostly disengage it should this be unsuccessful water may be injected into the eye if it still remain by inverting the lids we will be able to examine and move away the sand. If the sand stick in the corner it will not be easy to see it as the eye will roll about incessantly and cannot be held still by the Patient ————

Specks or the handle of a pair of scissors will enable us to hold the eye still so that we can examine it and move away the offending object with the point of a lancet ……

In trichiasis Inflammation of the eyes occur from the hairs of the lids growing inwards

When this is the case pulling the hairs out will produce a cure. But there is another affection of the eyelids. the itself is sometimes turned in. It may be turned out and divided on a piece of the skin of the lids may be cut out taking care not to divide the conjunctiva and the divided edges brought into contact and kept so by the interrupted Suture we can generally cure inflammation by bleeding which should be regulated by the violence of the fever and the degree of inflammation When the patient has lost a considerable quantity of blood from the arm he can bear cupping and leaches. If the Inflammation still continues there is another mode which is very Beneficial scarifications of the vessels of the adnatas should be tried. The next remedy is purging The antimonials are very useful Lastly applications to the eyes The mildest should be tried.

First of which the pithe of Sassafras is best. sometime a breade and milke poultice answers very well but it is frequently too heavy a crumb of stale breade put in a gauze bag and boiled and dipped in rose water and applied to the eye is found to be a very pleasant application If this does not answer Laudanum or Sac. Sat. Vet. alb. & Laudanum ~~[illegible]~~ (combined in the usual proportions. But astringents should not be applied too soon they do damage if used before the proper evacuations have been promised In such cases I think two drachms of vinegar greatly improves the ~~[illegible]~~ lity remedy when the inflammations has gone on to Suppuration and matter is collected under the Cornea It should immediatly by an incission made in the same manner as for Cataract instead of allowing it to open by the natural process of ulceration which would render the Cornea opaque, when these remedies fails Mercury is used to excite

irritation with vegetable diet often increases
pain. Two other circumstances are of the highest
importance 1st. Confining the patient to a dark
room and 2nd. a diet perfectly vegetable. a seton
in the neck may serve to decrease the inflammation
Unguis. This sometimes grows over the Cornea so as
to prevent the sight entirely the only remedy is
to divest of the membrane which is easily done
with a pair of scissors except that part which
adheres to the Cornea which should be care-
fully dissected off with a sharp knife I have already
mentioned that inflammation sometimes leaves
behind an opacity of the Cornea which almost
always remains, but which sometimes goes
off voluntarily if left itself. Mistaken notions
of the cause and nature of the Disease have
led physicians into very erroneous practice.
Molasses has been dropped into the eye and very
finely powdered glass has been used with a view
view to wear it off but they only serve to make it
worse

If any part of the Cornea remain transparent an operation may possibly restore vision again by making an artificials pupile. I once met a case where the patient had washed his eyes with his urine whilst labouring under the gonorrheas Inflammation Supervened and the whole of the Corneas became opaque. The patient applied to me for his sight and by his anxious request I consented to operate on his eyes. Tho' with little hope I passed a knife thro' the Corneas and cut off a piece of the Iris. The eyes was then closed and the patient put to bed. He can now see to read if the print be large. I never saw such an operation before. When the eyes are voluntarily inflamed it is very difficult to remove the inflamation. I once had a case of violent inflammation of the eyes the patient laboured under great pains in which bleeding, low diet, purging, salivation, had been used without success cupping and scarification

were otherwise intolerable was cured by Tar water alone and wetting rags in it and laying over them

Fistulas Lachrymalis

It is impossible to cure this without a knowledge of anatomy. The tears secreted by the lachrymale glands which are not used to lubricate the eyes are taken up by the puncta lachrymalia which carry them to the lachrymale sacks from which they are conveyed into the nose at the lower part just under the lower turbinated bone by means of the ductus ad nasum these two ducts which lead into the nose in common with other ducts, are liable to strictures when they are stopped by any means they become swelled between the obstruction and the eyes tears form in the eyes and the sacks is protruded if you press on the sacks or the swelling the tears will regurgitate and if the pressure be increased the tears will be followed by a viscid matter

resembling mucus which is probably secreted in the inner surface of the sacks if the eyelids stick together they must be washed and a piece of soft dressing placed between them. Not unfrequently inflammation takes place in the lachrymal sacks occasioned by the obstruction of tears or from the person taking cold the inflammation is generally attended with fever, blood letting & low diet are necessary for the cure when the sacks is distended so as to burst in the eye or opens by ulceration it is then called fistula lachrymalis. In fistula lachrymalis occurring from stictures of the lachrymal duct no inconvenience is experienced by the patient only that arising from the tumor which may be easily removed by placing the finger on the internal canthus of the eye and pressing the sacks, the tears will flow out down the cheek

an accumulation of tears in the lachrymal sack occasions the inflammation to terminate in suppuration

Cure. If the duct can be opened by a probe passed from the sac below the stricture so as to let the tears flow into the nose after the probe is withdrawn a piece of bougie long enough to reach from the outside of the eye into the nose is to be introduced and kept in to prevent the stricture stopping the passage again The bougie should be long enough to project about ¼ of an inch which should be bent down over the cheeks when the duct cannot be opened we must make an opening thro' the os unguis into the nose for the discharge of the tears. It sometimes happens that the fractured ~~ends~~ edges of the bones which is made by puncturing the unguis throw out a bony matter and close the opening again

The swelling of the sacks shows us when to make the opening. I shall now show the method of operating. when we make an incision thro the integuments to introduce the punch the backs of the knife should be upwards to prevent cutting the tendons of the orbicularis palpebrae muscle The incision being made a is to be passed up the nose to make the necessary ~~resistance~~ resistance against the punching instrument which is a hollow punch invented by Mr Hunter it is to be introduced into the sac till it comes into contact with the os unguis thro which the opening is to be made when the opening is to be made in this manner the use of a bougie is necessary it is sometimes attended with fungus and carries of the bone the carious portion of the bone should be extracted and the fungus treated as in any other part bringing the edges of the wound in contact and secure them with adhesive plaster and the tears will flow through their new made orifice

without difficulty

Lecture 19th

Cataract

By this term is meant an opacity of the Crystalline lens or its capsule which prevents a transmission of light to the retina it shows itself by the specks behind the pupils and is most commonly gray sometimes Black will I have seen it of an amber color It commences with dimness of vision compared by patients to their looking thro' thin gauze and sometimes before any opacity is discernible by looking into the eye there is to the patient the appearance so as if small threads or hairs were floating in the air before them. The disease very seldom occurs in very young people most people about 40. but I have seen it in an infant It often comes on without any external violence

I have seen one case follow a blow another ~~thinness~~ trichiasis a long list of medicines have been employed for the cure of cataract and Mercury may be placed at the head of them without any good effects this has been assisted by blood letting purges Blisters leaches electricity the last found to be of no use If it arise from mechanical violence it may deserve indeed nature unassisted by art possesses the power of removing the Opacity Of this I have known several instances I think it takes place oftenest when the capsule of the Lens is opaque oftener in women than in men I have seen the cases of two young women in whom this absorption occurred they would see by the edges of the convex lens which makes me believe the lens was removed I have seen another case brought on by an unsuccessful attempt to couch. as medicines are unsuccessful in the cure of this disease it is a happy circumstance that it may be relieved by surgery

Two operations have been proposed, viz 1st couching 2nd Extraction. Couching is performed with a Kneedle this is passed thro' the sclerotic coat about ¼ of an inch from its conjunction with the cornea and passed on till it gets to the center of the lens it is then turned with its flat part against the lens which is depressed below the vitreous humour if it shoulds rise the operation must be repeated Extraction consist in making a semi section of the cornea thro' which the lens is removed from the eye both of operations have been practised that of couching is the most ancient that of extraction is the best it is best because 1st the operation is not so painful this is proved by comparative operations the same patient has had the lens extracted from one eye and depressed in the other. 2nd when the cataract is taken out it can never obscure vision

but it may rise repeatedly when depressed occasioning a return of blindness and each time the operation must be repeated. It sometimes hangs lower in the posterior chamber of the eye and when the patient stoops causes blindness by its falling upon and closing the pupil it has been urged that the lens may be but this is seldom the case —

3rd When the cataract is fluid it may be evacuated but cannot be depressed I have known it to be entirely fluid it may be of the consistence of rather soft jelly or of the white of an egg not completely coagulated —

4th When the capsule is opaque as well as the lens it may be pulled but such opaque capsule cannot be depressed with the couching needle The opaque capsule is by no means a rare occurrence — It cannot be depressed because it stretches and bends down at that part in contact with the needle and often the operation returns to its place by its elasticity —

3th. When adhesion exists between the capsule and the lens and Iris by opening the Cornea they may be torn in extractions but not in depression without injury to the iris in one instance I saw the iris torn off the immovement attributed to extraction are 1st an opacity of the Cornea arising from the cicatrix but none exists when it is divided by a sharp knife with but one stroke if scissors be employed there is an opacity sometimes but this is not before the pupils and of course will not impede vision ——

2nd the passage of the lens thro' the pupil is said to stretch the Iris so irregularly so as to form an irregular pupil this sometimes does take place but it does not prevent vision besides it occurs sometimes in depression the patient does as well afterwards as before —

3rd. The Hazards of cutting the Iris in passing the knife across the Cornea unless the Operator

is very careful in passing the knife straight across the eye the aqueous humor will escape thro' the section of the cornea and the Iris will roll itself on the edge of the knife and part of it will be cut away by this may be avoided by rubbing the anterior part of the eye which will disengage the Iris ——

4th. The great danger that the vitreous humor may escape but this arises only in consequence of undue pressure being made the moment the section of the Cornea is finished pressure at that time is unnecessary and should not be made. As every case of Cataract does not pro mise equal success it is of consequence to know what Circumstances are favourable when it is complicated with other diseases the operation is improper The Circumstances favourable to the operation are the eyelids should be free from oedemas the patient should be free from pain in the head

when the operation has been performed during pain in the head the pain has been much increased. The surgeon should not be deceived in examining the eyes this may happen from opaque spots on the Cornea and a particular reflection of light from the eye he may avoid the error by looking at the eyes sideways the pupils will be seen behind the spots. In the latter the patient should be placed with his side to the window that the rays of light may fall obliquely on the eyes the pupils should contract and dilate freely this contraction and dilation does not prove the retina to be sound and it may be sound and the pupils be immovable if the patient can distinguish light from darkness the operation may be advised. In cases of immobility of the pupil when the retina is sound the Iris probably adheres to the capsule of the lens I saw a woman who had a cataract in each eye

The pupils moved freely in both I operated and found both lenses as hard nearly as a stone. The patient saw with but one eye tho' the operation was performed equally in each. The patient distinguishing light from darkness is not a certain test. Before advising the operation it will be necessary to enquire if the patient be subject to cough or if apt to vomit or sneeze. Some old people sneeze violently. If the patient be subject to sneezing we should watch the time for operating when he is least affected with it. I have seen pressure on the upper lip with the finger when the inclination of sneezing came on suppress it. I knew a case where sneezing ruptured a vessel in the iris haemorrhagy ensued which did not stop until a coagulum of blood was formed this extended between the divided edges of the cornea and prevented their union. I was fearful of removing the

Coagulum lest haemmorhage should again take place. The eye is suffocated and the patient lost his sight. Sneezing might also force out the vitreous humors. Persons apt to faint on every occasion are bad subjects are bad subjects they should take Laudanum before the operation. As inflammation sometimes occurs to a considerable extent and may go on to suppurations it is proper to confine the patient to a low diet for a few days, and to reduce the inflammatory Diathesis it will be necessary to use bleeding purging &c &c 10 days before the Operation a day or two before operating a blister may be applied to the back of the neck. The bowels should also be opened to prevent the necessity of rising for a few days. The best seasons for operating are spring and autumn Cold or hot weather is not proper because in the first the room cannot be kept equally

warm which exposes the patient to the risks of taking cold and in the latter he is apt to be restless. The instruments for operating first for making an incision of the cornea a knife after the direction of Baron Wenzel and similar gradually increase in width from the point to the handle it then serves as a wedge to prevent the escape of the aqueous humour. It should be thin but sufficiently firm to & not be broken. The upper edge which is blunt till near the point the rest very sharp. The knife should be very sharp it may be examined with a microscope or a much easier way is to look at it before a looking glass. In choosing a knife we should get one wider at the handle than the semidiameter of the cornea 2nd a lancet a little curved at the point with which the capsule of the Chrystalline lens may be torn 3rd a little scoop of goold or silver to extract small fragments which am

apt to remain behind & the small hooks to be passed thro' the pupil and fixed in the body of the Chrystaline lens, for its extraction & pt. a pair of small ~~[illegible]~~ forceps for the extraction of small fragments of the lens Capsule which may remain. It was the custom of the ancients surgeons to use the Spiculas-Oculi I use no instrument of this kinds to steady the eye the great objections to all instruments of this kind is that they occupy one hands of the operator the surgeon cannot rub the anterior part of the eye besides it gives pain to the patient and may excite inflammation in proceeding to the operation I find it of use in fixing the eye to assure the patient that there is no pain or danger attending it the patient is seated on a low chair with his side towards the window or else the reflection of light from the cornea will prevent you from seeing the cataract a bandages is applied

rounds the head and just above the eyes having two depending compresses attached to it to cover the eyes that compress hanging over the affected eye is pinned up to the bandage if the hair is long before it should be cut to prevent the chance of its getting into and irritating the eye The surgeon is seated on a chair considerably higher than that of the patients and taking his knife in his right or left hand according as the right or left eye is to be operated upon he proceeds to make the section of the cornea The patients head should be supported on the breast of an assistant who raises the upper eyelids in doing this the skin should be folded upon the superciliary ridge so as to prevent its closing The tonsus should be pressed firmly against the frontal margin of the socket the surgeon pulls down the under lids and waits till the eye is steady at that moment he applies the point of the knife to the cornea about 1/16 of an inch from the sclerotica he only applies

the knife does not suddenly puncture for at that time the eye generally recedes from the knife it should be followed and the moment it becomes fixed the puncture should be made the knife is then carried across the eye and brought out at the other side making a semicircular incission If while the section by the discharge of the aqueous humors the Iris comes forward so as to danger its being wounded the motion of the knife must be stopped and the Eye made to recede by gently rubbing the cornea the incission is then to be completed that the eye may not be the least pressed upon the assistant who raises the upper lid should let it fall as soon as the point of the knife has passed thro' the opposite side of the cornea in making the incission never draw back the knife for if this be done the knife no longer acts as a wedge to prevent the escape of the aqueous humor the knife is wide enough to cut itself out

but if owing to the motion of the eye or any other cause the knifes should be drawn backs it would be advisable to desist from the operation and to defer it tills the wound in the corneas is healed. Baron Wenzel advises to puncture the capsule of the Crystaline lens during the section of the cornea by dipping the point of knifes into the pupils this might be done if the eye was very steady but it mostly so unsteady as to render the Barons direction impracticable I prefer tearing the capsule afterwards with a needle with this the capsule can be much easier torn and if it should be opaque it can then be much easier extracted. In tearing the capsule care must be taken not to injure the Iris this being done the eye must be closed to give it rest and that the pupils may dilate - - - - - - - after resting a few moments the eye is opened by the surgeon and gradual pressure made upon the ball at the same time the divided

portions ~~edges~~ of the Cornea are raised a little with the scoop. If the lens does not come easily thro' the pupile, the surgeon takes hold of it with the needle or & hooks to facilitate its extraction. The moment it is out the lids should be closed and remain so sometime. They are afterwards opened and the state of the pupile examined. If the Capsule be not opaque the patient sees, if opaque the pupile remains white. The surgeon should next proceed to extract the ~~Capsule~~ fragments of the Capsule. These are often brought into the anterior chamber of the eye and discharged by gently rubbing the lids over the Cornea but if they remain in the eyes the scoop should be employed. This should not be pushed too far for fear of injuring the capsule of the vitreous humor. If the capsule of the lens is to be taken out a small forceps is the best instrument sometimes the lens cannot be extracted by any moderate degree pressure tho' aided by the hook it is then probable that

its capsule adheres to the Iris This adhesion must be torn away by the needle but this requires great nicety take care not to throw the Iris into folds as it may be torn sometimes before the operation we know the capsule is opaque we judge of this by spots of opacity appearing as through ~~the lens~~ detached from the lens In this case after the section of the cornea as it is known the capsule must be extracted. I advise the anterior part of the capsule to be ~~[illegible]~~ punched up with a pair of forceps by pulling the whole membrane may be easily taken out The capsule is extracted first because it can be readily holds of while the lens remain in the eye. The lens when divested of the capsule falls to the bottom of the eye it may be extracted by a small hooks. a small portion of the vitreous humor always escapes after removing the cataract it is customary to exhibit different substances as matches and the like to know if the patient has

vision. but the eyes should not be kept open too long during the operation none of the relations of the patient should be near him. A Gentleman who had been blind four year was operated on for Cataract his wife stood by during the operation and was the first person he saw The poor man burst into a flood of tears and it was with great difficulty he was prevented from literally crying his eyes out. After the operation is Completed a soft dry rag is to be applied to the eyes the depending piece of the Circular bandage is to be unpinned and it will turn down over the eyes on this a bandage should be applied and carried round the head The patient then is put to bed and inducd to lie on his back to prevent the escape of the humors all light should be excluded from the apartment the patient should live on a diet of vegetables in taking drink he must not raise his head a tea pot without a lid (as the lid might fall on his eyes and injure it) should be used for giving him drink

The patients hands must be secured by pieces of tape ~~to prevent~~ tied to the bed post to prevent his rubbing his eyes in his sleep In 8 or 10 days the eyes may be examined If pain or fever come on use remedies to ~~prevent~~ remove them and change the dressings every day as the moisture discharged from the eye is absorbed by the dressings which becomes very irritating when the dressings are changed always pulls down the under eye lid. The hairs if they have got into the incisions ~~prevent~~ of the cornea prevents its healing.

Lecture 20th

Hernia

Hernia may be defined to be a tumor occasioned by a protrusion of some of the contents of the abdomen. This takes place at different parts of the body but most frequently at the groin owing to the parietes of the belly being weaker at that part opposite the groin there is an opening for the spermatic cord in men and for the round ligament in women thro which the parts are protruded either the omentum or intestines. The protrusion may happen at different parts of the body. When the tumor is found at the navel it is called umbilical Hernia when in the groin bubonocele and when in the thigh femeral Hernia. In every instance it is caused by a protrusion of some part of the omentum or alimentary ~~ca~~

canal, In many hernias the protruded parts are enclosed in a sac which is formed by an elongations of the peritoneum

There is one species of Hernia called Hernia Congenita which is well worthy your attention here the vessels are in contact with the testicles. The ~~Tunica~~ Tunica vaginalis which is properly a peritoneal covering of the testes passes with them in their descent down into the scrotum the upper part of this sack generally closes up round the spermatic cords immediately after the descent of the testicle which is about Birth or two or three days ~~after~~ before. It sometimes happens that this descent of the scrotum does not immediately close up after the descent of the testicles but remains open for sometime and when it does not close up by coughing, sneezing, crying &c hernias is produced. as there are several kinds of hernias I shall at present confine myself to that species called

Bubonicle

Bubonocele

The symptoms are a swelling in the groin beginning at the abdominal ring and passing into the scrotum or Labia pudendi. The testicle can be felt at the bottom of the scrotum the tumor is soft bears handling very well and when the patient lies down disappears — Pressure on the abdomen makes it more tight and when and when the surgeon lays his hand and the patient coughs he will feel pressure made against his hand causing a sensation as tho' distended with wind. There are some diseases with which Hernias is likely to be confounded as bubo, swelled testicle, lumbar abscess, & hydrocele but by paying attention to circumstances it is very easy to distinguish between them a Bubo is generally preceded by a chancre is hard and painful and the tumor does not disappear upon lying down. It is likewise necessary and very

easy to distinguish between bubonocele &c the swelled testicle and hydrocele. The testicle is flattened hard and painful to the touch is only found at the bottom of the scrotum & the spermatic cords can be traced to the abdominal ring at which place it is free from swelling. In hydrocele the tumor begins at the bottom of the scrotum and works upwards & whereas the Hernia begins at the top to swell or in the groin to and works downwards. The fluctuations may be felt in Hydrocele or in swelled Testicles & hydrocele we can reduce the tumor by squeezing but hydrocele is sometimes more difficult I have seen it enveloped in a cyst which when the patient strained hard was protruded The testes was at the bottom Hydrocele is in general diaphanous a case came under my notice which was supposed to be Hernia and as such and as such it was trussed

I was convinced on examining it that it was Hydrocele it was diaphanous admitting the light to pass thro' the tumor and was cured by tapping and afterwards injection of wine In the lumbar abscess the matter from its seat in the Psoas Muscle down under Poupart's ligament following the course of the muscle & forms a tumor on the anterior and upper part of the thigh at which place the fluctuation can be felt and the tumor can be pushed from the thigh up into the cavity of the abdomen & vice versa - according as pressure is made on either. If your hands be placed on the abdomen and pressure made the tumor on the upper part of the thigh will be rendered more full and tense. The great danger liable to take place in Hernias is from great inflammation which ensues from the stoppage of the circulation of faeces in consequence of a stricture coming on

a structure may be formed by the neck of the sac or by the tendons of the externals obliques when the existance of a rupture is ascertained it should be reduced and supported by the application of a truss not unfrequently the patient can reduce it himself but when he cannot the physician by laying him down in a horizontal position for the most part can effect it after which a truss should be applied directly over the orifice. The truss is very generally applied on the soft part of the pubis so as to press the spermatic cords so as to occasion great uneasiness to the patient if continued for any length of time or, applied so far to the groin as not to effectually close the rupture. The best way is to examine it exactly with your finger taking the tumor into the abdomen and when you find the orifice apply the truss so that the soft part shall be exactly over it just above the apendages of the os pubis. Trusses are mostly applied only for a

particular ages but they should be employed when necessary at all ages. Strictures sometimes prevent the reduction of protruded parts but we cannot always reduce them even when there is no stricture and this for several reasons 1st because too larger a quantity of the bowels have collected in the tumor to allow of being reduced or returned 2nd the next difficulty in the reduction is from an alteration of a part of the omentum and 3rd from adhesion taking having taken place between the protruded parts and the sides of the opening or from the adhesion of the protruded parts between them selves. when the difficulties in reduction arise from adhesion as in the last case it will admit of no remedy only being supported by a truss when there has been no adhesion. I have succeeded by confining the patient to a horizontal position, low diet, bleeding, cathartics &c. and then then applied a truss when adhesion takes place so that the surgeon is unable to reduce the tumor

a sac made just so as to contain it should be applied or else the Hernia will continue to enlarge till it gets to a great size. I saw one in which the lowest part had got down to the knees. If the patient when in such a situation neglects the truss he is not only in great danger of strangulation but also in great distress the symptoms of it are increase of hardness of the tumor violent costiveness pain if the patient stands up hard contracted tense pulse & sometimes vomiting and the tumor becomes painful to the touch. when called to a case of strangulated hernia it requires immediately care and attention, he proceeds to return the protruded parts the patient should be placed in that condition which would throw the contents of the tumor into the abdomen he should be laid on a firm bed or matrass with his buttocks raised considerably highest and the thigh bent upon the body to relax the muscles when this is done squeze the protruded part cautiously with your hands, so as not to injure the bowels

when the patient can do it, it is best as he will be likely to use less violence so as not to injure any of the parts this operation is called taxis if this is not sufficient bleeding very copiously has been often used and Mr. Pott advises to continue it ad deliquium animi and then try if it can be accomplished ——

The bleeding tends to prevent any inflammation I have not however seen any one case of bleeding ad deliquium animi — when the reduction succeeded immediately after. Cathartics are then generally then given I have found as cream of tartar with about 8 or 10 grs of Jalap and one drop of mint water very well along with this the warm bath should be used the patient should be kept in it till he becomes very weak and whilst in the bath the surgeon should try again to reduce it. This from producing a generale relaxation will I have no doubt frequently succeed. I have a very favourable opinion of the warm bath in strangulated Hernias when all these remedies fail injection made by a

decoction of tobacco (1℥ ss to a pint of water) may be used this decoction is to be thrown up so as to occasion nausea and general relaxation. This is the most successfull remedy in strangulated Hernia the fumes of the tobacco are not so convenient as they require a peculiar apparatus and sometimes they excite spasms. When all these methods fail the application of colds, as ice and snow has proved useful than gutated hernias has been reduced by cold this remedy is particularly recommended by Mr Hilmen I would not hesitate to employ it when the other remedies fail It should be continued for some time, hernias for the space of 3 or 4 hours if necessary if all these remedies fail we must have recourse to an operation for if the patient be not relieved by some means he soon grows worse the sickness becomes more distressing the pain is more intense the belly swells the fever runs high hiccough colds sweats &c ensue but after a while these symptoms abate and the patient thinks himself getting

better and in some instances the contents of the tumor voluntarily go up but the symptoms soon return worse than before and death quickly closes the scene from mortification of the intestines coming on. It is difficult to tell when is the exact time to perform the operation because sometimes the patient recovers by the pressure in a short time and at other times the patient will take and for 5 days and then get well. But in general I would advise if the above remedies fails to perform it at most in 36 hours after its commencement; the strangulation contain increasing in reducing the tumor after all other remedies failed in taking the coils the bed considerably raised in this case the tumor succeeded voluntarily in the course of the night. There are two methods of operating for hernia and first for Bubonocele In proceeding to perform this the first caution is to shave away the hair then make an incision in the direction of pouparts ligament of about 4 inches in length.

and dissect of the upper part laying the tendon of the external oblique bare so as to expose the ring this done puncture the tendon of the external oblique in the directions of its fibres at a small distance about an inch from the ring A director is introduced at the puncture and passed out at the abdominal ring the part of the tendon lying over the director is divided lengthwise of its fibres. An attempt is made to reduce the contents by taxis this practice has been disapproved of by some Surgeons who say that the contents of the sac may be in such a state as to forbid a reduction and that the sac should be opened to examine ~~the~~ its contents for say they if any of the parts be killed or the sac contain acrid serum and be returned in this state to the abdomen it will occasion great inflammation, but I would ask these surgeons before the operation use every effort to reduce it, and in the present case if it can be reduced.

It will prevent ~~prevent~~ the necessity of opening the sac by which the risk of peritoneal inflammation will be avoided opening the sac will produce communication for the air with the cavity of the abdomen and all such communications for the air with the cavity of the abdomen are attended with violent inflammation which mostly terminates fatally on the 3 day or sooner should the attempts to reduce the strangulated sac prove ineffectual the operation must be continued the incision is continued in the direction of the tumor to the bottom of the scrotum and the sac is laid bare after this has attempts to scratch thro the sac with the point of the scalpel trying with a probe after each scratch to see if a puncture be not made when a puncture is made introduce a director and with a blunt pointed bistory enlarge the orifice so as to introduce the finger which is the best director for the knife after that the sac is divided thro the whole extent from the ring

next examine the contents of the sac, which if found must be carefully returned to the abdomen this at times cannot be done for 3 reasons 1st adhesions 2nd a change in some of the protruded parts or 3rd a stricture in the neck of the sac alone when this cannot be done on account of ~~the~~ a stricture in the mouth of the sac the stricture is then to divided taking care not to wound the intestines the finger should be introduced as far as possible for a director to the knife and in general the mouth of the sac is not so ~~small~~ small but that the point of the finger may enter a little way. sometimes adhesions take place so that the intestines cannot return, when the sac is laid open. They may be easily separated either with the finger or with the handle of the scalpel if the protruded part is altered in its shape the ring must be dilated to admit of its return: except it be formed by the Omentum then the altered part may be cut off If mortifications of the protruded part take

place

It should be separated and the sound part of the intestine joined by the interrupted suture and sewed fast to the sides of the wound notwithstanding the faces will for sometime ooze through the orifice. It will mostly heal well. Altho' in Bubonocele it is best not to open the sac when it can be avoided yet in Femoral ruptures I believe it is mostly safest to open the hernial sac and then to divide the stricture. The sac here is extremely thin and scarcely to be seen. In proceeding with this operation a good deal of caution is necessary to prevent wounding the intestine when cutting near the necks of the sac care should be had not to incur to either side because on the outside of the necks of the hernial sac passes the epigastric artery and on the inside of it the spermatic cords crossing each other directly over the stricture part. so that if you cut towards the inside you will wound the spermatic cord and if to the outside the Epigastric Artery

and if posteriorly the great blood vessels. To remedy this Mr. Gentlemen proposes to dilate the stricture by making the incission towards the pubis this methods is after opening the sac to introduce a director or the finger which is better along with a bistory having its edge looking towards the pubis when you come to the stricture the incission is to be made towards the pubis dividing the stricture so as to cut behind the spermatic cord. Dr. Monro advises to cut from the neck of the sac towards the navels so that by keeping that direction you might dilate the stricture towards the angle formed by the Epigastric artery and spermatic cords and thereby avoids cutting either.

Mr Hay supposes that the former ab ligament forms the chief obstructions to the reduction of the protruded parts

I would advise you to read Pott, Hay & Cooper.

[illegible] introduced on a
Place the patient on a table of a convenient height. placed in a darker time when
a good light. P. Butt.ns elbow of the most a
some white raised - the lys raised equally upwards under the sho.
a little & separated so the neralation in the i. open suffi
operator may stand between - reending tum. nts. If the
empty the bladder - Shave the pa. cut of with found in a
Begin at least an inch above id should be
the supe.r end of the tum. cut mortaj.d case st be removed
the incision the spine down to the bottom if the sac
of the scrotum. it prevents a lized, cut of u. part that
lodgement of the matter after safety preserve. separated
wards form. - make yr incis.n very be converted the sides of
cautiously thro' the cellular sub- ration finished mass feco
stance - Spr.ts vessels sometimes on ined by a sus- u.d, hearts
the posterior par. of the swelle- tu. Keep pio do heals
is almost always behind it. - an opiate the abdomen
Before making yr incis.n of the - cool - Bled
skin & cell. sub. grasp the tum. cup nor of gen will come
with left hand so as to render detached gin
it somewhat tense on the an- ly. 24 first days will unite
terior part. & keep so while the not to stick ctely within
incis.n is made - the hern. sac discharges
continuously deposited thro' as near

the faeces in the natural way, sometimes the
Omentum is found in a state of sphacelation

the lower part as possible - it is appears filled with bloody or serum - take care not to wound the intestines - we may tell when the sac is cut thro' by a blunt probe pass easily in - then insert in the fore finger & with a B. K. on it, divide the sac its whole length from below, gut up to the open. open. in the muscle - In making the reduction put in first, the parts that come out last. Put the finger on that part of the gut connected with the mesentery - During the reduction the thigh should be somewhat more elevated. Sometimes the reduct.n facilitated by first draw. out some more of the gut than is in sac.

If our attempts for the reduction of the parts fail we must proceed to enlarge the open. in the tendon - Enter the finger at the open. above the protrudd parts introduce

I would advise you to read Pott, Hay & Cooper.

[illegible] introduced on a
ing the [illegible] tissue. The finger as a director time when
keep it a little beyond the point of the nail a
free incision should be made obliquely upwards under the sac
so as merely to continue the separation in the open suffi
fibers of the tendon, without dividing them. If the
if part of the omentum gangrenous cut of with found in a
a pair scissors - if any considerable vessels divided should be
tied - examine that intestines is sound before
detaching the tendon, if any mortified case
of & unite to the sound part. if the sac
is found hard, thick, & much enlarged, cut of
the fore & lateral part - with safety preserve.
the posterior part as it may be connected
with spermatic chord. - the operation finished
deep with soft lint - retained by a sus-
pensory Bag stuffed with lint. - Keep his
loins higher than the Body - an opiate
should be given - Keep him cool - Bleed
if fever - low diet - frequent use of
mild laxatives - But if much debilitated give
tendon nourish. diet - if he survives 3. or 4 first days
in - generally recovers - recommend not to stick
the bound.

the abdomen
go will come
will unite
tely within
discharges

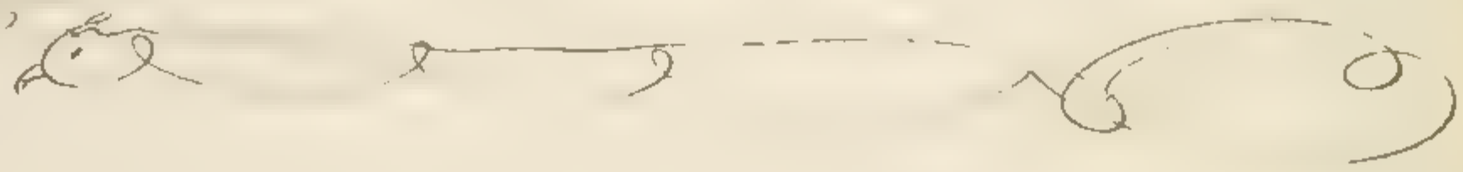
the faeces in the natural way sometimes the
Omentum is found in a state of sphacelation

French surgeons endeavour to reduce
without dividing the sack — in some instances
we might do right in others return mortified
parts — — — /Bell

Why open the sac after the operation when
we are so anxious to reduce it sac wall
before it — danger in open. peritone inflam —
produced. & admits the air into the abdom —
But if it cannot be reduc. without open. the
sac lay it bare to the bottom of the scrotum
then attempt to scratch with the point of the
scalpel, try. with a probe after each scratch
to see if a puncture is made then introduce
the finger, after supporting open by a director
& bistoury — & divide thro' which exactly as
by Bell. — if the contents of the sac cant be
examined or returned from the strictures
on the mouth of the sac — it is then to be
divided, using. the finger as a director — Take
care not to wound the intestines —

I would advise you to read Pott, Hay & Cooper.
Sometimes the finger cannot be introduced on account of the smalleness of the aperture when this happens introduce a director under the structure and then with a bistory lay it open sufficiently to reduce the protruded parts If the protruded part of the intestines is found in a gangreenous state that part must be removed taking care to cut thro' a sound part that the dead part may be completely separated and the sound part stitched to the side of the wound, so that the intestines may protrude about an inch the protruded parts will in time as the wounds heals be contracted within the cavity of the abdomen and as they are drawn in the edges will come near in contact till at last they will unite and form a perfect canal completely within the abdomen and the patient will discharge the faeces in the natural way sometimes the Omentum is found in a state of sphacelation

It should never be returned so to the abdomen or else the dead portions will cause peritonitis inflammation. The folds must be spread out to extricate the intestines, and the mortified part may be separated by a pair of scissors. If an artery is wounded or ~~[illegible]~~ divided it must be taken up leaving the two ends sufficiently long to reach out of the abdomen. Mr. Hay has proposed tying of the portion with a ligament, tying it so tight as only to induct the omentum at first and daily tightening it till at last it is completely separated and when the gangrenous parts of the Omentum is protruded down thro the abdominal ring it is a very good method.



Lecture 21st

Hydrocele

Hydrocele is a term applied to a disease consisting of a preternatural collection of water in the scrotum. Of this disease there are three species. The 1st is a an effusion of water into the cellular membrane of the scrotum in this common made. 2nd species is when the water is contained between the tunica vaginalis and the testis the 3rd species is when it is contained in a cist, or a cist on the spermatic cord or body of the intestines the 1st kind is an anasarcous tumor is a symptom of a general dropsy and is easy distinguished from the other species of Hydrocele it has a smooth equal surface as diffused equally over the scrotum the tumor has a doughy feel besides undulations may be made by pressure with the fingers the skin is nearly of its natural color and is diaphanous

The skin of the penis also becomes distended. If the patient lay down no diminution in bulk takes place in the tumor the swelling begins at the bottom of the scrotum the testicle can be easily felt at the beginning of the disease and likewise the spermatic cords and no fluctuation can be perceived ——

2nd the second kind is that of the tunica vaginalis is owing either to an increased action of the exhalent vessels — or as some say to the decreased actions of the absorbents. The swelling in this species begins at the bottom of the scrotum soft at first but gradually grows more hard and cannot be reduced by pressure. Tho sometimes it collects suddenly from the rupture of a lymphatic the tumor is small at first in which state the testis can readily be felt. but when the tumor is large it is not perceivable the fluctuations can readily be perceived and the tumor is diaphonous the disease mostly likely to be confounded with it

is Hernia It is however easily distinguished from Hernias as in the former the tumor begins at the bottom of the scrotum and extends ~~[illegible]~~ upwards but in the latter, it begins above and works downwards. Hydrocele is more permanent whereas in Hernias the tumor disappears when we lie down Scherrus of the testis sometimes be confounded with it we can distinguish between scherrus of the testis and hydrocele by the ~~latter~~ former having swelled spermatic cords ~~with a latter having~~ and in Scherrus the tumor is painful and so heavy ~~than~~ Hydrocele it is scarcely possible to confound it with hernia humoralis This kind of hydrocele however is very much complicated so as to require more attention to distinguish between it and all other diseases the 3rd species is when water is contained in one or more Cysts of the spermatic cord Here the testicle can be felt at the bottom of the scrotum the tumor

is diaphorous and swells up to the abdominal ring and in one case I believe the tumor extended thro' the ring itself in such cases there is much difficulty in distinguishing it from hernia only if we press the tumor, so that the water is forced into the abdomen the instant we takeaway the pressure it will return again that pressure on the sides of the tumor causes no difference of the former But will often succeed in removing the latter having mentioned the different species I shall next proceed to the **Treatment** The inconvenience results to the patient from Hydrocele except from the weight and bulk of the tumor tho' in hot weather the skin at times excoriates and if the patient walks about causes a pain in the back from its weight this is relieved by a suspending bandage being used which fits so easy and is worn with so little inconvenience. That some patients refuse to submit to the Operation. The first species which is that of

anasarcous hydrocele is generally cured by immediate treatment. It however happens sometimes that an operation for the discharge of the fluid is necessary for the cure. This I would advise to be done by making small punctures with the point of a lancet thro' the skin and permitting it to ooze out. This is preferable to making an opening by caustic or the introduction of a seaton or making a deep incission which may produce mortification. The punctures are to covered with dry lint. They should be made in four or five places. Sometimes an anasarcous tumor is produced by the bursting of the tunica vaginalis. A case came under my care who was sitting still and found something snap in his scrotum and shortly after a tumor appeared which was soft and gradually diffused itself over the whole scrotum the skin became black which alarmed the patient very much as he suspected mortification was coming on. Three Physicians were called in who not understanding the nature of the case were

doubtfull that his apprehensions were too well founded. Mr. Hunter supposes that the tunica vaginalis was ruptured and the colour was owing to the escape this proposition was readily agreed to and the patient was informed that in time the bloods would be absorbed and the wound in the tunica vaginalis would be healed but that he would be subject to a return of the complaint all of which turned out as had been predicted. Next of the Hydrocele of the Tunica vaginalis. Dr. Else mentions a case of the hydrocele of the tunica vaginalis which was cured by purging I have cured it by causing cold water to be poured on it out of the spout of a tea kettle two or three times a day this method will will often succeed in children. Sometimes it is absorbed without any aids when all these fail it is necessary to have recourse to an operation. Relief may be commonly obtained by evacuating the water this is done by means of a common lancet which I prefer or an instrument called

a trocar which consist of a silver tube in which is a stilete projecting beyond the canulas about 1/4 of an inch which part is triangular and sharp for cutting. The trocar is to be pushed thro the scrotum into the cavity of the Hydrocele when introduced the stilete is withdrawn to suffer the water to pass off after that is done the wound is closed by applying a strip of adhesive plaster and the part supported by a suspending bandage. This is only palliative and is not sufficient to cure the Disease completely. But to produce a radical cure it is necessary something more should be done. There are several modes of effecting a radical cure. The Object of all of them is to effect an adhesion between the tunica vaginalis & testis of which I shall now mention only four. The most ancient of them is to make an long incission thro the scrotum so as to examine the state of the testis when it is ascertained to be free from scirrous but is placed in the cavity between the tunica vaginalis and body

if the testes to excite inflammation of the parts so that the two surfaces may adhere together the link is to be left in till suppuration takes place freely then it is to be extracted when the tunica vaginalis adheres to the testis forming a ~~[illegible]~~ union with it this frequently succeeds but it causes great pain and inflammation and it not unfrequently happens that abscesses form after the patient is thought to be well I have seen abscesses formed in the scrotum in consequence of some portion of thread being left behind to rot after the wounds had healed up. This I have seen once but it frequently happens under this treatment the most eligible is by means of an Eschar formed by Caustic this is not only attended with great pain and inflammation but causes a large suppurating sore to the no small distress of the patient. Mr Ellis has proposed to apply it only of the size of a shilling which he thinks would be sufficient to excite

Inflammations over the cavity. but this often produces violent inflammations of the whole scrotum and sometimes mortification. this methods is however seldom used at present.

The next method is to pass a seton thro' the scrotum between the tunicae vaginalis and Testis This methods is recommended by Mr. Potts but it is exceptionable because sometimes adhesions will take place only at the place of the conjunctions of the seton with the Tunica vaginalis and there the disease may again occur and likewise when there are Cysts in the body of the testicle this treatment will not do unless these cannot be opened without laying open the tunicae vaginalis, but the cure must be effected by suppuration. Mr Carlo has revived the methods of throwing stimulating injections into the scrotum He uses wine diluted with one half water. Some advise

w solutions of white vitriol and I have no-
doubt that it would answer very well some
have advised a solution of corrosive sublimate
but if this is used very weak after the water
has been drawn off an injection of wine may
be thrown into the tunica vaginalis this will
sometimes cause a good deal of pain across
the lumbar regions and has produced syncope
It should soon be let out after two or 3 min
utes inflammation will come on in about
three or 4 days but never runs very high and
soon subsides without any trouble if it should
run very high venesect may be necessary frequently
on the cessation of inflammation the water again
returns In all cases of that sort I have effected
a cure by pouring cold water over the part to
about the quantity of half a gallon per day when
the first operation fails it is not so severe, that
that the patient will submit mostly to it a
second time when one or two injections will

not do. Mr. Hunter proposes to make an incision of about an inch long in the anterior and upper part of the scrotum so that the finger may be introduced to ascertain if any hydatids exist and fill the space between the tunica vaginalis and testis with flower or a small bolus of dough to cause an equable suppuration over the whole cavity after 4 or five days suppurations will have taken place at which time the the dough will become soft so as only to resist the thickened pus in consequence of having of having mixed with the fluids thrown out into the cavity the contractions of the scrotum which takes place will force out the dough gradually and as it is removed or evacuated the sides are brought into contact gradually or regularly adhesion takes place and the cure is effected I have performed this operation several times and believe it to be the best mode of curing

the complaint I now shew the operations of injecting with spirit of wine or wine itself. The instruments are a trocar which consists of a silver cannulas about 3 inches long with a small handle to the ends of it in this tube is a stilette projecting about ~~one~~ ⅛ of an inch beyond the ends of it. a cock with a bladder or Gum elastic bag being fixed to the ends of it for containing the injection. the patient on the edges of a chair and directed to grasp the bottom of it with the hands because if his hands are at liberty he may be apt to disturb the surgeon.

When fixed in this manner so that the scrotum projects over the edges of the chair the operator takes holds of it and causes a tenseness in that part of the tumor where he would wish to make the puncture and then pushes in the trochar as soon as the instrument has

penetrates the cavity the stilette is withdrawn and the canulae is pushed farther into the cavity to prevent the tunica vaginalis sliping of the end of the tube which would prevent the water from passing when the water is drawn off an injection of port wine is thrown in and retained some time and then suffered to run out the wound is closed with adhesive plaster the scrotum is suspended and the Patient put to bed. Care must be taken to keep the canulae thro the tunica vaginalis when you inject else the whole of the contents will be thrown into the cellular membrane without effecting its way into the proper place and a new operation will be necessary. Care should be taken likewise to examine with when you are going to puncture the scrotum to avoid wounding the testicle which too often happens a gentleman troubled with Hydrocele called

a surgeon to his aid who performed the usual operation with a trocar, but to his great astonishment no water issued upon his withdrawing the stilette. another surgeon was called who likewise performed the operation nearly in the same plane but with similar success a third was called but met with the same disappointment as the others they now agreed that it was a very difficult case to understand Mr. Hunters aid was then desired who upon examining and recollecting the peculiar situation which the testes gives when squeezed thro' he could not feel its situation, yet by the sensation caused by squeezing the funiculus testis to be attached to the scrotum at the anterior part just where they then pressed the trocar had been pushed into the body of the testis he then pierced the scrotum at the lower and back parts of the tumor where the testis usually lies and the water flowed out as usual in the common cases ——

Lecture 22nd...

Lithotomy

Calculous concretions are found in different parts of the body. I have found one of the sizes of a common pea at the base of the tongue. They are formed in the salivary ducts in the lungs Uterus, &c. But they are most commonly found in the organs of Urine. The incrustations found deposited on the sides of vessels which hold urine prove that the calculous substance which it contains may readily form a stone. The quantity of calculous matter varies in different persons and it is greater at one time than at another in the urine of the same person. It is not my intention to inquire into the circumstances which dispose the body to the formation of stone it being sufficient for my purpose to know that it can be performed by a deposition from

urine. I have seen a calculous concretion, found in the ends of a catheter that remained in the bladder but a few days the different kinds of substances that have been found in the centre of the calculi prove sufficiently that any solids substance remaining in the bladder for a few days may be a nucleus for a stone. The stone is not always of one uniform consistence but consists of several laminas some of which are hards and some soft they are likewise of different colours some white and others a darks brown The reason of this difference I believe has never been satisfactorily accounted for stone is not exclusively found in the bladder it is found frequently in the kidneys and prostrate glands I believe it most frequently originates in the kidneys and is washed down the ureters into the bladder tho this is not alway the

case

when in the kidneys it causes uneasy sensation and pain in the small of the back a case of this kind was cured ~~by~~ in a Gentleman by riding on horse back from Germantown to Philadelphia But he was the same day with stone in the bladder When stones are found in the kidneys there is a considerable difference from what happens when formed in the bladder Mr. Bloomfield has described the symptoms so accurately that I shall give them in his "own words." "when they exist in the bladder they occasion an extension of that viscus by preventing a discharge of urine but when in the kidneys they prevent the urine from flowing into the bladder The stone frequently lodges in the ureter and distension of the ureter above the lodgement of the stone till the column of urine be so great as to force it down into the bladder this causes considerable pain but when it

washed among the ureter into the bladder the pa
tient is made easier the stone is sometimes
lodged between the coats of the bladder produ
cing great pain, the itchings are violent when
the patient complains of burning and pain
in the bladder we have then reason to believe
that the stone has found its way into it. The
patient should drink plentifully of barley water
and endeavour to pass the stone by urine
he should attempt this repeatedly if this
does not not succeed the pain becomes worse
The pain is greater after the patient has voi
ded his urine when a stone exists in the
bladder the patient feels an itching sensation
at the glands penis accompanied with pain
and heat of the bladder. at the place where
the stone is lodged the stream of urine is
suddenly stopped at times causing great pain
by the fall of the stone on the orifice of the
Urethra and other times flows in a full stream

an uneasy sensation is felt all along the urethra between the perinaeum and glands penis causing a sensation of something lodged in the passage to urge and pull it causing thereby an elongation of both the penis and prepuce sometimes it is attended with tenesmus and prolapsus ani. The urine is pale and often mixed with blood. The digestion is interrupted occasioning flatulence. Costiveness weakness and fever supervene and the patient becomes very weak and if the stone is not taken out death soon takes place these are the generally attending symptoms of ~~a~~ stone in the bladder they do not prove it unquestionably as they sometimes occur from other causes as ulcerations and inflammations of the neck of the bladder, or ulcers or tumors in the scrotum a case of a young woman came under my care with the symptoms above described she was sounded three times without finding any

stone

after which mercury was prescribed and in ~~about~~ about two weeks the patient got well. In this case I suspect there was an ulcer at the neck of the bladder. Hæmorrhoidal tumors not unfrequently cause these symptoms sometimes the stone is encysted and then the patient never feels any pain because when he moves about the stone is kept from falling on the neck of the bladder. When the patient discharges small pieces of matter we may expect the existance of a stone mostly the stone can be felt by sounding which is the surest way of determining its existance. for this purpose we use an instrument called a sound tho' the attempts of the surgeon to feel the stone may be frustrated by its situation behind and below the neck of the bladder. But if the surgeon introduces his finger into the rectum and presses that part of the bladder up

he will be able immediately to feel the stone
many different remedies have been employed
for the cure of the stone but they generally do
no good different substances have been ta
ken into the stomach for the cure of the stone
and others have been injected into the bladder
as a solvent for it, but also of no use, strong
alkaline solutions are found to dissolve stones
out of the body and hence have been advised
for the cure of stone the most useful reme
dies taken into the stomach are aqua Nephre
tica alkaline lime water Uva-Ursi.

Medicines have been likewise advised to be
injected into the bladder to dissolve the stone
an great objection to medicines being used
as a solvent is. that they may occasion the
coats of the bladder to slough off and thereby
endanger the life of the patient the carbonate
of soda or pot ashe has been serviceable in
some cases

sine water is sometimes useful in easing the pain and Uva-Ursi has been given for that purpose blood-letting and opiates are the best remedies for at fit of the stone also the warm bath when these substances that are employed fail the operations of lythotomy becomes necessary for the existance of the patient. Before proceeding to the operation in cold weather we should put the sounds in warm water to prevent contraction of the parts The patient should be laid on a table or some convenient place. and the surgeon proceeds to introduce the sounds after oiling it with the concave part turned towards the bladder if it is not easily introduced in this manner turns the convex side towards the bladder and try again. Frequently the sounds will pass till it comes to the membranous part of the Urethras and then suddenly stop no force should be used to gain an entrance lest the sounds be forced

out of the Urethra into the soft parts. To avoid the folds in the Urethra which stops the sound the instrument is to be turned rounds with its concave side up. in such a manner that it shall revolve exactly on its axis. Some surgeons turns the concave side of the sounds to the bladder and persist in that particular way for its introduction while others as tenaciously pursue the opposite way. This arises altogether from prejudice because they have been used to do it always in that way The way in which the silver catheter is introduced is so similar to the introduction of the sounds that I shall not take up any more of your time in describing the mode of using the latter when the Sounds is introduced into the bladder turn it in all directions if you do not feel the stone push it further into the bladder if it is not yet felt cause the patient to change

his situations. Frequently when the stone has eluded the sounds by placing the patient on his hands and knees it has been directly felt when its existance is fairly ascertained the operation may be performed.

Before the operation the patient should attend to his diet about two weeks and a day before the operations he should take a dose of Castor oil to open his bowels about an hour before the operation a Glyster should be administered some surgeons advise to empty the bladder before the operation but I should advise to let it be moderately distended with urine which will render the operation very easy. The instruments necessary for an operation are first a table about an ordinary height I commonly use a common dining Table whatever table should be used let it be narrow so that

The assistants can then an opportunity of holding without leaving over if a high wind time & prevent them from holding steadily a blanket or something of the kind is to be spread over the table and pillows to be applied to support the patients heads. It will be necessary to be provided with warm water and likewise some sweet oil, also ligatures and a tenaculum for taking up any vessels that may be cut. Ligatures must be provided to tie the hands to the feet to prevent the patient kicking. These answer very well of worsted binding near a groove director — a scalpel a sharp pointed bistoury a gorget to divide the sides of the neck of the bladder the point of the gorget should be such as to pass easily (which is of great consequence) in the groove of the staff which is to be very clear of blood or unctuous matter and very smooth and clear.

Forceps there are of different ~~kinds~~ shapes and sizes I would prefer the smallest ones to those which have large ends for grasping the stone If the small forceps are not strong enough for extracting the stone a common scoop such as a nutchens use or extracting the childs head may be introduced by the side of them and assist in drawing out the stone sometimes the stone is not sufficently strong to bear the extracting but breaks in peaces then the small forceps are much best Any peeces are broken off it may be seen very readily by examining the hand extracted a syringe has been found of advantage in cleansing the bladder of small peeces of stone by introducing the sounds and injecting ~~warm~~ warm water into the bladder which will wash away every small peece that may remain It is necessary for the edge of the Gorget to be very sharp at the beak or else

some force will be necessary to penetrate the blad-
der by which the gorget may go too far and
wounds the fundus of the bladder an accident
of which kind actually happened with Mr.
Bloomfield. The reason why this instrument
instrument is mostly used is because the
cutter cannot get at it to sharpen it on ac-
count of the beak so remove this inconven-
ience I have got some made so that the sides
can be taken off leaving the beak only behind
when taken off in this manner they can be
sharpened at the point as easily as at any
other part. The sides are fastened on by means
of a screw. The old form of the gorget used
to be but one edged that is having one for
cutting one blunt but they are now used
with two cutting edges so that both sides
of the neck of the bladder may be divided
The edges used to run from the beak in a
circular or rounded manner but I prefer

them straight forming an acute angle. I shall
now shew the mode of operating after the di-
rector is introduced. The patient is desired
to take hold of the ankle of his heel when
the surgeon passes the ligatures which are
previously adjusted to the wrist round. There
at the same time an assistant secures the other
two assistants stands by the side of the table
and each takes one knee of the patient in
his axilla and grasps the foot with his hands.
another assistant takes hold of the handle of
the director and draws it to the side the
surgeon holds away the scrotum from the
perineum in which he makes an incision
from above downwards between the anus and
os ischium on the left side having cut through the
skin and cellular membrane feels for the stoff
then takes a sharp pointed bistory placing your
your finger at the sphincter ani to prevent your
cutting it and cut towards your finger till

you finds the groove. Then with the bistoury rest on the back on your finger and put the point in the groove of the staff laying it bare the surgeon then places the back of the Gorget in the groove of the staff taking holds of the handle of the staff with his left hand and bringing it to a right angle with the body ——————

An assistant then takes holds of the scrotum and draws it of the surgeon then bears downwards the handle of the gorget and pushes it into the bladder the urine which is in the bladder now escapes when the gorget has got into the bladder the staff is to be withdrawn before the gorget is withdrawn introduce the forceps then take away the gorget drawing it carefully so as not to make a new incision The handles of the forceps should be turned upwards as gravity would cause the stone to fall to the lower side of the bladder the forceps should never be held in one hand but one handle of the forceps taken in each hand

when you have got hold of the stone introduce your finger by the side of the forceps to loosen it or any part of it that may be entangled and to place the stone in the best and easiest way for its escape from the bladder when the stone is extracted examine if any more are left in the bladder or if any pieces are broken off the one taken out. If any vessels be cut use the commons for securing them the patient is untied his knees put close together and laid on his side in the bed ———

But unfortunately as you are about to push in children they are seized with a straining fit the diaphragm and abdominal muscles force the viscera of the abdomen on the fundus of the bladder and forcing it on to the neck of the bladder if you push in the gorget during the straining you will very certainly cut the fundus of the bladder if it come on after you have divided the neck and the urine evacuated it will be safe to withdraw the gorget —

The operation of Lithotomy is much simplified in females some have advised to introduce the the staff into the bladder and then with a bistory make an opening into it from the vagina and extract the stone from the bladder thro' the vagina sometimes this succeeds thro' the vagina answers very well I myself have performed the operation in this manner and the wound healed very well I however prefer the gorget

Lecture — 23.

Amputations.

I told you when treating of wounds that when the parts were so injured that they could not recover amputations became necessary. If this is deferred till inflammation has supervened we must then wait till it has subsided amputations likewise becomes necessary in case of white swelling tumors in the joints diseases of the joints often produce hectic fever and the patient becomes much debilitated by night sweats loss of appetite and &c and amputation is necessary for his restoration if the patients stomach be good never fails to operate tho he be much emaciated ——————

The ancient surgeons advised amputation in cases where mortification had taken place and whilst it was still progressing

This practice should always be avoided because if the limb be taken off in the progressive state of mortification the stump will be attacked and the patient rendered liable to another operation but if the surgeon wait till the mortification has stopped & the dead part separated, the bone will only remain to be cut which will give but little pain to the patient. Another cause of amputation is large tumors causing the absorption of bones or joints also fungus Haematodes. I shall now mention the manner of operating sometimes we have to amputate the fingers if the if the disease is at or near the ends of the fingers it will answer very well to take it off at the first or second joint so that a portion of skin may be left to cover the ends of the bone then done the edges of the skin are to be brought in contact and kept in this situation

by adhesive plaster and secured by a roller which as the arteries are so small will be sufficient to prevent any Haemorrhage sometimes the fingers have to be taken of at the articulation of the metacarpals bones all that is necessary then is to cut down between the fingers till you come to the joint then after the finger is taken off and the vessels secured bring the edges together and apply adhesive plaster a roller is then to be passed round the hand sometimes we have to take the metacarpal bones away. This may be done at its articulation with the carpus or sawed of at any part when it is necessary with a metacarpal saw first separating it from the other parts by making an incision directly over the middle of the bone from between the fingers down to the place to where you would take it off if any vessels are cut take them up with a tenaculum Bring the edges in contact

with adhesive plaster and apply a bandage. 2nd
The hand. Amputation of the leg and first
of the things necessary to the performance of
the operation a tourniquet, a bandage, a Tor-
niquet, these are to be applied. These are to
be applied if the leg is to be amputated just
above the knee but if the thigh is taken off
they are to be applied near the groin a stra-
ight knife this should be very sharp with
which only mangle some parts and cut others
for little dulls the skin will ~~will~~ be thrown
into folds before the knife, and the surface
of the divided edges will be very uneven & rag-
ged and scalpels will be wanted. a cutlin
this is a knife with two edges. a retractor this
is a piece of leather with 3 tails the middle
piece is passed thro between and fibula to
hold back the soft parts while the bone is
taken off a saw for cutting off the bone its
necessary that the saw be not made in by
bending on the bath it will be apt to break

the bone off before it is cut thro' leaving portions to be broken off with the nippers. A pair of nippers to break of any spiculas that may remain a tenaculum besides these it is necessary to have some warm water sponges needles ligatures lint adhesive plaster & tow and two bandages of linen called tourniquet. In proceeding to the operation the patient is laid on a ~~blanket~~ table covered with a blanket or firm matrass, the compress is first laid over the artery and the tourniquet applied over it to stop the circulation about an hour before the operation the patient should take a dose of laudanum. not so much to ease the pain as to give him fortitude and fit him to undergo the operation because some patients cannot stand it. I have seen one patient faint three times under the same operation. screw the tourniquet tills the circulation is stopped. In order to ascertain whether this is effectual I commonly put my finger on the

anterior tibial artery while the assistant screws the tourniquet by which I can take as soon as it is stopped when the injury is low down near the foot the Surgeon has his choice where about to operate. If it is a person of high life who wants to have the appearance of two legs & go in company and who can afford to get an artificial leg it may do to operate as far below the knee as convenient but if it be a poor man who has to undergo hardships he can but ill afford an artificial leg and should have the operation performed just below the knee he can then bend his knee and bear the weight on the part naturally formed without much inconvenience from the projecting stump which would be greatly in the way was the leg taken off at the ankle this inconvenience arising from a stump projecting so far behind is so great that a person subjected to it undergoes a second operation to get rid of it —

In proceeding to operate let an assistant first draw up the skin then take a straight knife and make an incission round the leg it is not necessary that this should be also at one stroke as some surgeons advise I have seen the surgeon place himself in such a posture to make the incission round at the same stroke that I was really affraid he would cut a piece off his own nose which might have been done by the least slip as the floor was sanded to catch the blood some surgeons advise to make the incission straight to the bone, but I would advise it to be made obliquely so that the flesh on the back part of the leg may come in contact with the skin on the forepart and completely cover the end of the bone after you have cut round thro' the skin and cellular membrane dissect the integuments from the muscles and turn them backs if this cannot be done they must

the

drawn back and then divide the muscles down to the bone this done take the cattlin and divide the interosseous ligaments and muscles and pass the middle slip of the retractor between the bones to draw back the soft parts then saw off the bones some advise to hold the saw so as to cut both bones at once this is often inconvenient. I mostly saw the fibula first and then the tibia. It is necessary to make long strokes with the saw as the heel becomes clogged after the leg is off wash the surface with warm water then search for the principal arteries which must be drawn out by the tenaculum and secured with a ligature after the principal artery and all that can be seen are tied the Tourniquet should be loosed to see if any of the flesh arteries bleed warm water should be poured on the part and the patient have a little wine and water to drink to excite the circulation and expose all the bleeding arteries that will bleed when also are secured wash away all the clots of blood

and draw down the integuments over the end of the bone and wrap a bandage round the stump to prevent the contractions of the vessels secure the edges of the wound in contact by means of adhesive plaster before these are applied the ligatures are to be brought out at the corners of the wound a piece of lint spread with cerate is applied between the edges to prevent the union by the first intention for if they unite before the ligatures come away they will prevent the same from being drawn out and an abscess will be formed causing great pain to the patient after the adhesive plaster apply lint spread with simple cerate then a bag of tow, then the longets in a conical form and secure them by a roller the Tourniquet should be left though loose after the leg is dressed to be in readiness if haemorrhagy should ensue. The patient is now put to bed and the stump rested on soft pillows

Amputation of the Thigh The instruments are much the same only the cutting is not wanted nor need the retractor be slit in two places but only in the middle. This operation is to be made as low down as possible but so that none of the diseased parts are cut. after making an incission thro the skin direct the integuments as in the other case and divide the muscles down to the bone this done apply the retractor and saw the bone. After washing it take up all the large arteries and large veins in old people the arteries are sometimes ossifieds Then pass a needle rounds some portion of the muscles including them in the ligature the better to prevent haemorrhagy all the other processes are such as I have described in the Leg

(Bronchotomy sometimes a swelling of or obstruction of the asperia arteria takes place to such a degree that an operation becomes necessary This operation is performed between the

cricoid and Thyroid Cartilages. First make a longitudinal incision down to the cartilages and then puncture the bronchia with the point of a knife and introduce a silver canula, which is to be secured in its situation by means of tapes passed thro' the holes in the bars of the canulas and round the neck of the patient this is a very easy and safe operation no vessels run in the way to cause haemorrhagy

Ascites This is a collection of water in the cavity of the belly for which it is necessary sometimes to perform an operation called paracentesis. The operation is generally performed at the left side about half way between the superior anterior spinous processes and the navel the left side is preferred for the purpose ——

of avoiding the liver. The celebrated Mr Cline in performing this operation wounded the Epigastric artery and the patient was suffered to die from haemorrhagy I say suffered because he could have cut down to the bleeding vessel and secured it this made him sacrificed one in operating in the side He therefore proposed to make an opening about half way between the os pubis and navel notwithstanding the tendinous part that is perforated how ever contrary to theory it may seem to be; it heals up as well as any other part. The urine should be first always evacuated. This operation is generally performed with a trocar the stillette of which some Surgeons have made flat this must be very inconvenient and require a great deal of force to push the cu nula into the belly others have the stillette triangular it is of the greatest consequence to ascertain whether the Tumor be really

a collection of water or not if it contain water it may be generally told by fluctuations an
Ladies who had been several times tapped ~~[illegible]~~ with as cites believed herself to be afflicted with a ce tirus of the complaint and applied to a sur geon for relief. He seizing the scar plunged in the trocar in the same place but to his great astonishment no water followed In about 3 days she died and on examination he traced the wound into the Uterus and lodged in the hip of the foetus. I generally perform this with a common lancet which answers very well and instead of a trocar introduce a large female catheter the round end of which will be more easy and less liable to be stop ped by the intestines coming in contact with the ~~intestine~~ orifice which is in the sides of the catheter but in the end of the canula and will allow the water to flow out without in terruption. The patient sometimes while the water is flowing or just after it is evacuated

faints he should have some wine and water given him and a degree of pressure made on the abdomen to keep up some of the pressure that existed before after the water is all drawn off withdraw the aspirator and bring the edges of the wound ~~by~~ in contact by adhesive plaster and apply a compress over the orifice this done, place a roller round the belly for its support--

Lecture 24th

Aneurism

An aneurism is a morbid dilation of the heart or some part of the arterial system –

Aneurisms are described or divided into true and false. The true are such as are already described and are attended with no wound or division of the cutis. The false are such as occur from accident independent of any disease of the arteries. I shall confine myself principally to true aneurism. There is a greater tendency to aneurism one time than at another. They may occur at the aorta and in different parts of the body at the same time but are mostly confined to one part of the arterial system which yielding to the momentum of the blood grows weaker and weaker and at last bursts. The proximate cause of aneurism is

a disproportion between the momentum of blood and the power of the artery of the remote causes of aneurism we know but little excessive drinking of ardent liquors is said to be one cause it is supposed that violent straining may a foundation for aneurism. I have twice seen false aneurisms in the groin from contusions It has been likewise said that aneurism has sometimes been occasioned by bleeding in consequence of the lancet passing thro' the vein and dividing or injuring the outer coats of the artery leaving it too weak to resist the force of the heart to ascertain this Mr. Hunter laid bare the carotid artery of a dog he then dissected away the coats of the artery one after another till he came to the internal polished coat the wound was then tied up and the dog left to himself about three weeks after this the dog was killed the artery was examined and found to be of the natural size not having

dilated in any wise and the coats were consolidated to the sides of the artery and got well. The circumstance which lays the foundation for an aneurism is a diseased state of the artery which renders the artery too weak to resist the impetus of an aneurism is not simply a dilation of the artery but a roughening of the internal coats of the artery which at times become ossified. aneurisms occur less frequently in woman than in men. I have however seen several cases in women they occur most frequently in young people It is of the greatest consequence to distinguish between aneurisms and tumours of any other kind The difference is obscure and often not to be perceived especially in old aneurisms In recent aneurisms the pulsation can always be felt by pressure but after some time when the swelling and tenuity is much increased putting the parts

on a stretch and the coagula is formed the pulse becomes obstructed because the stroke of the heart has to be continued thro' ~~to the fin~~ the coagulae to the fingers & all recent cases we can remove the blood contained in the swelling by pressure made for some time over the part tho' it will soon return when the pressure is taken off whereas a tumor remains immovable a tumor may form upon an artery or be so situated as to partake of the pulsation and in that respect resemble an aneurism but we can place the finger behind it so as to pull it up from off the artery and the pulsation ceases even when we cannot raise the tumor from off the artery we are still enabled to distinguish it from an aneurism by the particular pulsations for when a tumor is situated on an artery we are sensible

sensible to the whole body moreing when the dilations take place in the thorax it is know by a palpitations of the heart and a difficulty of breathing when the dilations of an artery has the progress is much slower than we would suppose, because the impetus of the blood as the arterial tube is divided over a larger surface, it does not assume all at one but increases gradually coagulas forming as the sacks dilends. The aneurism as it enlarges contracts adhesions to the parts around it and the internals parts wear away to a great size, the dilation of the arterial coming takes place on that side of the artery which is most remote from the heart or on that on which the impetus of the heart acts most powerfully tho some times they are equaley dilated

the pressure they occasions frequently causes the absorption of the surrounding parts I have seen a portions of the ribs absorbed by it. In this manner it goes on till it arrives at the skin when it burst and the patient dies by a sudden gush of blood In an aneurismal sac there will be formed a number of coagulas laminæ

The general indications in the treatment of Aneurisms is to lessen the quanty of blood in in the trunks of the arteries rest and low diet are also necessary bandages have been likewise applied and are said to have performed cures

I shall speak chiefly of popliteau aneurism at first there is no pain but a pulsating Tumor which enlarges till it produces pain from putting the large nerves on the stretch The surest methods of curing aneurism is to tie up the artery. The mode of performing this operation some years ago was to make an incession

into the aneurismal sac while the Tourniquet was screwed light on the upper part of the thigh and after discharging the blood to tie up the artery just above the sac but this is frequently unsafe on account of the diseased state of the artery which would be likely to burst at the place where it was tied. To remedy this Mr. Hunter proposed to take up the artery about half way between the knee and the anterior spinous process of the ilium. To avoid the Haemorrhage which occurred from the diseased and ossified state of the artery which would not allow the vessels to unite the limb will be nourished by the anastomosing branches. It however sometimes happens that they are not sufficient for the support of the limb and mortification ensues. This surprise is not owing to any want of efficiency in the size of the anastomosing vessels or their number.

but to the bones and pressure of the swelling obstructing the circulation I saw one case of this kind but I suspect it was to the tumor preventing the circulation in the anastomosing branches I proceeding to perform the operation first have a tourniquet fixed on the upper front of the thigh but not tight allowing allowing the artery to pulsate then making the incision about 4 inches in length longitudinally in the course of the fibres of the sartorius down to it and dissect along the lower edge of it. It is necessary to pay particular attention for if you get above the sartorius muscle you may cut down to the bone and not find the arteries after you have dissected thro the skin and cellular membrane feel with your finger for the pulsation of the artery it is best to use the handle of the knife for exposing the artery as there are great numbers of anastomosing branches

branches which would probably be wounded by the sharp edges of the scalpel there is a thin facia before you come to the artery this which you must scratch with the point of the knife a little to one side of the artery to avoid wounding it after the artery is brot into view it may be either taken up by means of a silver needle or as Mr Abernethy advises by passing a couple round it at about ½ an inch distance from each other and then seperate the artery between the ligatures by which means he says the ligatures come away sooner the artery is divided to take off the tension. I have seen the ends recede ¾ of an inch from each other when divided In which ever way it is performed the edges or ends of the ligatures are to be brot outside of the wound and a pleget applied so as to press the bottom of the wound close together so that the outside of the wound may not heal too soon and thereby form an abscess. I have seen an abscess from this cause extend from the knee to the anterior

spinous process of the ilium, the aneurismal tumor after this treatment most frequently disappears. This is sometimes not the case and the tumor goes on to suppuration. If the tumor after it has suppurated does not open of itself by an ulcerative process it should be opened by an incission when this is neglected sometimes very serious consequences occur some new it produce an abscess of the Hip joint and the patient died When the artery burst and allows the bloods to flow into the cellular membrane the pulsation may be perceived at first but the bloods stagnating soon coagulates and the swelling and tension increases any pulsation being felt, and then its impossible to say whether it be an abscess or an aneurism. When this occurs we should apply a Tourniquet and make a puncture into it if it be an abscess the matter will be assumed to flow out if it be an aneurism the Artery must be tied up, where the tension is great part of the coagula should be scraped out at the puncture to relieve the tension in 8 or 10 days

The tunics will have disappeared and the extra vasculated blood vessels have come away ---

False Aneurism. There are two kinds both occurring from wounds of the artery. One arises from bleeding in consequence of the lancet puncturing thro' the vein into the cavity of the artery & letting the blood flow from the artery into the vein this forms what is called varicose aneurism it may be told by a thrilling sensation which is easily distinguishable, a hissing noise may be heard by applying the ear near the orifice sometimes the two orifices do not exactly correspond with eachother and the blood instead of flowing into the vein escapes into the cellular membrane and forms a tense aneurismal sac communicating with both the artery and vein causing great pain to the patient and if an operation is not performed the skin becomes tense and bursts or sloughs away the bleeding profusely and throwing the

patient into great danger. The varicose aneurism is free from danger, and therefore no operation should be performed the only inconvenience arising from it is a little deformity caused by the dilation of the vein at that place but when the blood escapes into the cellular substance an operation becomes necessary the artery & vein should both be secured above and below the sac tho a varicose aneurism does not in general require an operation yet some of their modifications do

Lecture 25th.

Fistula in Ano

This disease is a cavernous ulcer situated in the vicinity of the anus. It frequently consists of one two or more cells and is caused by inflammation if the parts are greatly inflamed and violent suppuration ensues it produces dryness and bearing down pain and not unfrequently produces suppression of urine when it arrives at so great a height it generally terminates in suppuration forming an abscess and making an opening either externally or into the rectum or both if it communicate externally only it is called incomplete fistulas. If it communicate both externally and internally it is called complete but if it communicate with the rectum only it is called blind or occult fistula

To examine into the state of the parts the patient should lean over a table and the surgeon having his finger into oiled should introduce it into the rectum and insert a probe into the abscess if he can feel the point of the probe the fistulas is complete but if it be incomplete he will be unable to feel the probe sometimes the abscess is small resembly a bile and is easily curedd sometimes the side of the rectum is separated and dilated from the bottom to a very great extent rising even to the brim of of the pelvis the causes which occasion these abscesses are the same as occasion inflammation in any other part of the body we should examine very carefully in all cases of pain in the regions of the anus to discover whether it originates from pile if not so that remedies should be used to avoid suppurations when we are consulted by a patient for pain

situated in the regions of the anus. we should however disagreeable it be to the patient or ourselves always examine into the real nature of the complaint when inflammations or swelling are found our first endeavour should be to prevent suppuration blood should be drawn according to the nature of the case and the constitution of the patient, purging, leaching and poultices of bread and milk these remedies are in general sufficient to remove strangury when not the warm bath should be tried sometimes these remedies fail and the tumor increases to such a size as to occasion a total suppression of urine a catheter should be introduced for the relief of the patient which may be left in a considerable time without any bad consequences resulting from it the Catheter should be made of gum elastic which can adapt itself to the shape of the part

and will be worn with much more ease than a silver one. Sometimes inflammation comes on in the buttocks, with a disposition to gangreen on this subject I advise you to read Pott. Tho° I wrote advise you from the success I have had in the use of blisters to apply them in similar cases If the surgeon is called in early he may generally resolve the inflammation, but unfortunately we seldom see these cases till suppuration has taken place, when an operation is necessary for the cure. In all cases when there is a collection of matter we should make an opening into the most prominent part and not wait for it to open naturally in all cases we should preserve the antiphlogistic Regimen till inflammation subsides I shall proceed in mention the circumstances which render it difficult to perform a cure without a surgicals operation.

1st. When the Fistulas is complete the formation

of pus keeps its sides distended and prevents its healing and next in addition to this the ulceration of its sides prevents its healing if the orifice is small so that the matter cannot readily place out it collects in the cavity and the granulations cannot come in contact ——

2nde. The suppurating cavity is prevented from healing by the external orifice closing up too soon and then the patient thinks himself well but his hopes are soon disappointed for the matter has either to force its way out again or to make a new opening ——

3rd When the fistula is complete faeces pass into the opening, and are passed out at the external orifice when he goes to stool ——

when ouce the matter makes its way into the rectum and will be discharged that way but it will frequently be obstructed by the faeces the in most cases the opening goes obliquely

downwards and when the patient goes to stool the faeces will close up the orifice but I have seen cases when the orifice opened up into the rectum and whenever faeces were voided would get into the abscess and distend it very much & cause great ~~pain~~ distress to the patient.

4th When nature is unequal to the cure without the assistance of a surgeon as first when the cavity is on one side of the sphincter and the patient goes to stool the contractions of the vessels will draw the detached side from its natural situation, destroying the newly formed granulations and preventing its cure 2nd another obstructions to the cure is when the patient goes to stool the gut is somewhat protruded and any adhesions that may have taken place in its contracted state is destroyed. It is to this cause that the small portion of blood which appears after stool. 5th when owing to some cause the healing of the fistulae has been prevented for some time

the parts become callous, as was before explained and such calocity happens

6th. The practice of introducing substances into the abscess as stopping it full of lint called by some surgeons dressing it to the bottom"

7th when the extent of the fistulas is carried a considerable way into the pelvis and even to the upper part of the rectum accompanied with various natural secretions & even and even where the art of the best surgeons ~~have~~ is often failed.

8th the generale health of the patient this should be attended to as it will greatly assist the cure.

The Operation for Fistula in Ano consists in dividing the Sphincter and detached gut because first when cut prevents its acting so as to injure the granulations & 2nd the faces can pass readily out without protruding the rectum. For information on the particulars of performing this operation I would

advise you to read Pott. My object has been to shew the principals on which the healing is affected altho I shall make some remarks on the mode of operating. When the fistula is complete, the patient is to lean over a Table then the Surgeon after oiling his finger is to introduce it into the annus then introduce a bistory thro' the fistular cavity till it comes in contact with the finger draw away both bistory and finger together & the bistory divides all the parts between the upper opening at which it was inserted into the rectum it divides the Sphincter ands rectum from its upper communication to its extremity. In the introduction of the bistory the patient will feel considerable pain from the edges of the instrument cutting as it is inserted To remedy this I have a silver ~~probe~~ cap

which goes on the point of the bistory, and ex
tends along one side to the handle being a little
wider than the edge — when the bistory is intro
duced by pushing a little nob at the end of
the Case it falls off leaving the edge exposed
another methods, when a silver case is not
at hands is to place a piece of warm linen
on the edge this should be long enough to
reach the end of the handle so that when the
bistory is introduced ~~wh~~ we can draw away
the linnen and then divide the parts this
mode answers extremely well. sometimes the
opening into the rectum is so low down that
we can pass a director from the abscess into
the rectum and out at the anus in this
case the part may be divided by a scal
pel, but when the Fistulas is so high up
that to divide the part with a bistory
would endanger a haemorrhage we should

pass a ligature thro' it out at the anus, and tie it tho' not so tight as to occasion great pain this will evade the hemorhage and the part within the ligature will be divided by ulceration absorption. The wound occasioned by the ligature will heal merely as fast as the ulceration goes on so that by the time the ligature has cut thro', the wounds will be nearly healed up tho' sometimes it does not heal so fast ——

Hare Lip.

which has received its name from its resemblance to the lip of that animal. It mostly takes place in the upper lip, and is but one slit tho' sometimes the lip is divided in two places. These are most frequently born with as tho' they sometimes happen from accident. When they occur at birth the sutures uniting the maxillary bones together is at times not

well consolidated owing to the want of the gentle pressure of the lip. In such cases the lips should be united immediately in proceeding to do this we should have a pair of strong scissors very sharp which are the most convenient; and cut a triangular piece off from each lip taking care to cut out the upper angle or else the lip however well united below will not heal above The piece cut resembles the letter **V** after this is done the edges are to be drawn equably together and so secured together by two silver pins by the twisted suture always taking off the points of the pins after they are introduced to avoid hurting the patient. This is especially necessary in children The pins should be left in about 4 days when they may be withdrawn. This can be done by taking hold of the ends with a pair of nippers as the pins will hold pretty fast. lay your finger on the

threads when you draw out the pins to prevent pulling it off. The threads may be left on for two or three days longer by which time it will be perfectly well. The threads will be agglutinated to the part by the mucus of the nose ——

Lecture 26th

Strictures in the Urethra

By this term Stricture is meant the diminution of any canale at a particular part. When they occur in the urethra they most ly happen at the bulb yet they sometimes take place at the middle of the urethra and sometimes beyond the middle of it say beyond the bulb at the membranous part. Tho' rarely they are of two kinds spasmodic and permanent. Tho' these two kinds are not unfrequently combined.

The first effect of a stricture in the Urethra is to decrease or lessen the flow of urine & oftentimes the patient does not suspect any disease until the voiding of urine he finds it to pass drop by drop. He will now have frequent trials to make water passing a little at a time and this not without considerable strainguary and straining a gleet in general attends it owing to the straining and irritation there is in passing the water the parts existing between the bladder and the stricture become very much dilated and the other parts diminished resembling in its effects a string tied round the penis The stricture most commonly runs security round the penis or urethra but not always for it is sometimes found at one side only whenever spasms

supervene in such a stricture the passage is completely closed. The causes are cold weather, cold feet and the intemperate use of strong drinks. I had a patient in whom it was caused by coitus by too long a retention of . The great difficulty there is to ascertain the causes is the reason that the impression is generally not treated successfully for the stricture when not ——— venereal disease is sometimes the cause of it

Treatment. The permanent stricture may be dilated with a bougie much depends upon the preparation of bougies and upon the make. In general use waxed linen pieces of fine linen cut to a point and dipped in pure wax and rolled smoothly up make the best bougies. The point must be small but the body sufficiently

stiff to

to bear the force necessary for its introduction. The bougie may be introduced as far as it will enter and left for sometime with its point in contact with the stricture till the irritation has subsided and then press it gently forward by which means it will be frequently overcome commonly when the bougie is introduced the patient will faint and a cold sweat will break out over him. This seldom happens after the thirds introduction of the bougie when the stricture is small it may then be dilated. Sometimes strictures occur in which the strictured part is so closed as not to admit the point of the bougie In such cases we sometimes succeed by telling the patient passes a bougie down the stricture & press the point of it in the stricture for the space of an hour every day or perhaps two. Sometimes the canal is thrown to one side making the passage irregular when this occurs the point

of the bougie is to be bent to one side and then introduced, sometimes the irritation and pressure of the urine accumulates in the parts causes ulceration in some of the parts behind the stricture forming an artificial opening called fistula. In such cases there are two modes of relief either by caustic or by lancet. Caustic was first used by Mr Hunter and then by Mr Flom afterwards. I have used it myself in several cases with very good effect. The caustic is rolled up in the end of the bougie and tied by a piece of fine thread the end of the caustic may project a little. To prevent the caustic from burning the the canal before it gets to the stricture a small cap of waxed linnen secured to a fine thread on the end of it answers very well when the bougie is passed down to the stricture the cap may be withdrawn by means of the thread

when the stricture is at the ends or bulbe of the urethras, or before it it may be divided by a lancet defended by a silver canula the distension of the urethras behind the urethra makes it almost impossible to divide any other but the strictured part.

When the canula is introduced to the stricture the lancet may be pushed through it and it be divided, but the circumstance of the curvature of the urethras makes it difficult to divide it from the back and the curved canulas answers very well in some such cases when the stricture is dilated a bougie or catheter should be introduced & kept in for several days when if there be a fistula in perineu it will heal up in a few days. In spas modic strictures to treat it by caustic is very hurtful the warm bath or a small piece of tobacco on the end of the bougie

introduced to be in contact with the stric ture will frequently give relief or an an odyne Glister, Ven, Sect, Liquid Laudanum Emetics have proved Serviceable

Cancerous Breasts

( ) Inde the mode of extraiting it when the tumours are formed in the breast if they do not yield to the antiphlogistic treatment with the use of Mercury it is best to extract them early there are two methods of extracting them 1st by Caustic and 2ndly by the knife The last method is the best as we are able to distinguish better between the diseased and sound parts this may be done by one incision made directly over the middle of the breast If the integuments are sound, but ulceration or even induration of any part of the skin has taken place it will be necessary to make two incisions so that the

indurated part may be embraced between them and removed. If the Glands in the axillas are affected by the tumor we must continue the incision in the course of the Lymphatics to the tumified gland of the axillas and remove the tumified Glands and indurated Lymphatics with the tumor. It is often difficult to get at the gland from their close situation in the axillas but the weight of the tumor if it be large will draw them down so that you will be able to get your finger above them to tie a ligature. wounds which should always be done before they are seperated on account of the many vessels of that part. when the tumor is taken out, the edges of the wounds are to be brought in contact and secured by adhesive plaster that they may unite by the first intention

Abscesses of the Hip joint

The first symptom or Indication of this disease in children (for it generally occurs in children tills about the age of 14) or the patient is it refuses to walk or stand It is mostly attended with pain from the commencement but however this is not always the case but when it is a concomitant is often delusive occurring not in the hip but in the knee this very frequently deceives the parent and so very often the physician is so deceived as to apply substances to the knee instead of the hip Pain when it is an attendant is not always constant but comes on at intervals and continues for an hour or so & then ceases It is often worse at night after the disease has existed sometime, a swelling and enlargement of the hip & adjacent soft parts take place at this period pressure or touching the hip occasions pain If the patient

stands up he always rests on the sound side bearing no weight on the diseased limb but bends the knee of the diseased side forward and the toes only rest on the floor this disease of the hip-joint is often mistaken for a disease of the spine it may however be distinguished from a curvies of the spine by laying the patient upon his back on the table for if only the hip be affected you can easily straighten & cure the spine **CAUSES** It frequently comes on without any apparent cause but often it occurs from blows on the hip and jumping After some time the disease progresses we frequently find the limb considerably shortened this takes place in consequence of the bone being pushed out of the acetabulum by tumors forming in the socket and the head of the bone is drawn upwards by the action of the muscles of the dorsum of the illium this circumstance of luxation by means of disease in the joints has given rise to the term of Spontaneous Luxation in com

mon

the luxation is upwards and backwards sometimes it takes place downwards and forwards from gravity acting and the muscles being much relaxed sooner or later suppuration commences and the bone is found in a carious situation. Suppuration does not always however take place for it has happen that a new acetabulum has taken place. It is attended with more or less pain and the matter which is formed is discharged by one or more openings In this state the patient very frequently looses his appetite he becomes very much emaciated has night sweats and hectic fever next ensues In the progress of this disease the thigh dwindles very much becoming much smaller, than natural. In some cases the shortening does not take place for the heads of the bone becomes diseased at the acetabulum and forms an anchylose with the socket sometimes the socket & head of the bone are wholy removed and then if you examine you can pass a probe into the pelvis

Treatment Unfortunately we are not often called in the forming stage of the disease I say unfortunately for if we were called in early in the forming state of the disease it might be sometimes counteracted. when called to a patient with the usual tones first bleed 2 nd purge for every other day for 3 or 4 months or say for ~~every~~ 2 or 3 mo the best remedy I have found for this purpose was

Jallap and cream of tartar It should be given to produce 4 or 5 evacuations daily you would suppose children could not bear such a severe regimen but experience proves that they bear it very well. It is always necessary to prevent all motion He should be put upon a vegetable diet after this a warm bath may be used I think it is more beneficial when impregnated with muriate of soda or some neutral salt I have used salt brine once or twice a week I have mentioned tumefaction of the hip because it is from this circumstance that it is decided that the disease exists the application of cantharides on the hip is frequently advised but I have tried them in several cases and have found them of no efficacy. The application of leaches to the part is often of great service

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PHYSICKS

LECTURES